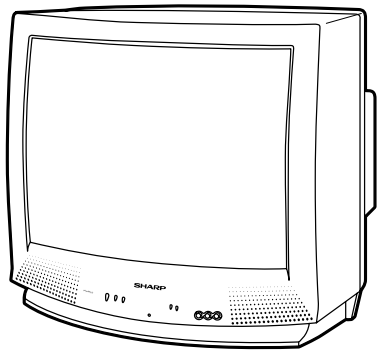
SERVICE MANUAL

COLOR TELEVISION

MODELS 27N-S300/CN27S30

SHARP SERVICE MANUAL

S20X227N-S300



COLOR TELEVISION

Chassis No. SN-81A

MODELS 27N-S300 CN27S30

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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ELECTRICAL SPECIFICATIONS

POWER INPUT ..... 120 V AC 60 Hz
POWER RATING 126W
PICTURE SIZE ..... 2,187 cm^2 (339 sq inch)
CONVERGENCE ..... Magnetic
SWEEP DEFLECTION ..... Magnetic
FOCUS ..... Hi-Bi-Potential Electrostatic
INTERMEDIATE FREQUENCIES
Picture IF Carrier Frequency ..... 45.75 MHz
Sound IF Carrier Frequency ..... 41.25 MHz
Color Sub-Carrier Frequency ..... 42.17 MHz (Nominal)
AUDIO POWER
OUTPUT RATING ..... 1.3W + 1.3W (at 10% distortion and Dual CH Operate)
SPEAKER
SIZE ..... 8 cm (Round)
VOICE COIL IMPEDANCE ..... 8 ohm at 400 Hz
ANTENNA INPUT IMPEDANCE
VHF/UHF ..... 75 ohm Unbalanced
TUNING RANGES
VHF-Channels ..... 2 thru 13
UHF-Channels ..... 14 thru 69
CATV Channels ..... 1 thru 125
(EIA, Channel Plan U.S.A.)

Specifications are subject to change without prior notice.

SHARP CORPORATION

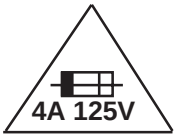
This document has been published to be used for after sales service only.
The contents are subject to change without notice.

IMPORTANT SERVICE SAFETY PRECAUTION

■ **Service work should be performed only by qualified service technicians who are throughly familiar with all safety checks and the servicing guidelines which follow:**

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.
3. Semiconductor heat sinks are potential shock hazards when the chassis is operating.
4. The chassis in this receiver has two ground systems which are separated by insulating material. The non-isolated (hot) ground system is for the B+ voltage regulator circuit and the horizontal output circuit. The isolated ground system is for the low B+ DC voltages and the secondary circuit of the high voltage transformer.
   To prevent electrical shock use an isolation transformer between the line cord and power receptacle, when servicing this chassis.



CAUTION: FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 4A-125V FUSE.

SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove the static charge by connecting a 10k ohm resistor in series with an insulated wire (such as a test probe) between the picture tube ground and the anode lead. (AC line cord should be disconnected from AC outlet.)

1. Picture tube in this receiver employs integral implosion protection.
2. Replace with tube of the same type number for continued safety.
3. Do not lift picture tube by the neck.
4. Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage anode completely.

X-RADIATION AND HIGH VOLTAGE LIMITS

1. Be sure all service personnel are aware of the procedures and instructions covering X-radiation. The only potential source of X-ray in current solid state TV receivers is the picture tube. However, the picture tube does not emit measurable X-Ray radiation, if the high voltage is as specified in the "High Voltage Check" instructions.
   It is only when high voltage is excessive that X-radiation is capable of penetrating the shell of the picture tube including the lead in the glass material. The important precaution is to keep the high voltage below the maximum level specified.
2. It is essential that servicemen have available at all times an accurate high voltage meter.
   The calibration of this meter should be checked periodically.
3. High voltage should always be kept at the rated value -no higher. Operation at higher voltages may cause a failure of the picture tube or high voltage circuitry and;also, under certain conditions, may produce radiation in exceeding of desirable levels.
4. When the high voltage regulator is operating properly there is no possibility of an X-radiation problem. Every time a color chassis is serviced, the brightness should be tested while monitoring the high voltage with a meter to be certain that the high voltage does not exceed the specified value and that it is regulating correctly.
5. Do not use a picture tube other than that specified or make unrecommended circuit modifications to the high voltage circuitry.
6. When trouble shooting and taking test measurements on a receiver with excessive high voltage, avoid being unnecessarily close to the receiver.
   Do not operate the receiver longer than is necessary to locate the cause of excessive voltage.

IMPORTANT SERVICE SAFETY PRECAUTION

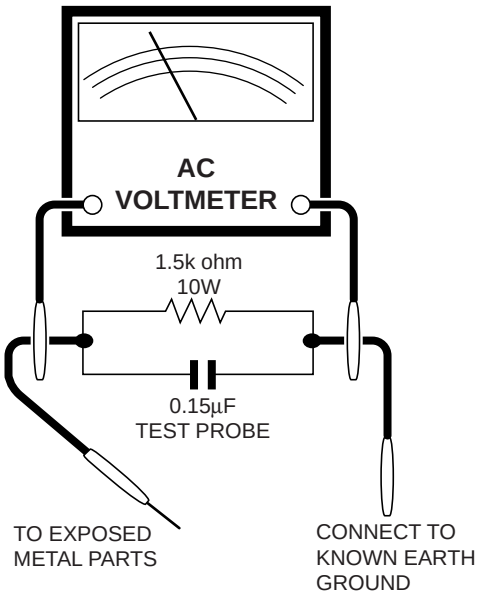
(Continued)

BEFORE RETURNING THE RECEIVER (Fire & Shock Hazard)

Before returning the receiver to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators and etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.

- Plug the AC cord directly into a 120 volt AC outlet, (Do not use an isolation transformer for this test).
- Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15µF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to earth ground.
- Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity to measure the AC voltage drop across the resistor.
- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon and etc.) and measure the AC voltage drop across the resistor.
  AII checks must be repeated with the AC line cord plug connection reversed. (If necessary, a non-polarized adapter plug must be used only for the purpose of completing these check.)
  Any current measured must not exceed 0.5 milliamp. Any measurements not within the limits outlined above indicate of a potential shock hazard and corrective action must be taken before returning the instrument to the customer.



SAFETY NOTICE

Many electrical and mechanical parts in television receivers have special safety-related characteristics. These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage andetc. Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠" and shaded areas in the Replacement Parts Lists and Schematic Diagrams.

For continued protection, replacement parts must be identical to those used in the original circuit. The use of substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire, X-radiation or other hazards.

PRECAUTIONS A PRENDRE LORS DE LA REPARATION

■ **Ne peut effectuer la réparation qu' un technicien spécialisé qui s'est parfaitement accoutumé à toute vérification de sécurité et aux conseils suivants.**

AVERTISSEMENT

1. N'entreprendre aucune modification de tout circuit. C'est dangereux.
2. Débrancher le récepteur avant toute réparation.
3. Les déversoirs thermiques à semi-conducteurs peuvent présenter un danger de choc électrique lorsque le réceqteur est en marche.
4. Le châssis de ce récepteur possède deux systèmes de masse qui sont séparées par du matériel d'isolation. Le système de masse non-isolée (sous tension) est pour le circuit du régulateur de tension B+ et le circuit de sortie horizontale. Le système de masse isolée est pour les tensions DC B+ basses et le circuit secondaire du transformateur haute tension. Pour éviter tout risque d'électrocution lors de l'entretien de ce châssis, utiliser un transformateur d'isolation entre le cordon de ligne et la prise de courant.

PRECAUTION: POUR LA PROTECTION CONTINUE CONTRE LES RISQUES D'INCENDIE, REMPLACER LE FUSIBLE PAR UN FUSIBLE DE MEME TYPE 4A-125V.

REPARATION DU SYSTEME A HAUTE TENSION ET DU TUBE-IMAGE

Lors de la réparation de ce systéme, supprimer la charge statique en branchant une résistance de 10 kΩ en série avec un fil isolé (comme une sonde d'essai) entre la mise à la terre du tube-image et le fil d'anodel. (Le corden d'alimentation doit être retiré de la prise murale.)

1. Le tube image dans ce récepteur emploie une protection intégrée contre l'implosion.
2. Par mesure de sécurité, changer le tube-image pour un tube du même numéro de type.
3. Ne pas lever le tube-image par son col.
4. Ne manipuler le tube-image qu'en porant des lunettes incassables et qu'après avoir déchargé totalement la haute tension.

LIMITES DES RADIATIONS X ET DE LA HAUTE TENSION

1. Tout le personnel réparateur doit être instruit des instructions et procédés relatifs aux radiations X.
   Le tube-image, seule source de rayons X dons les téleviseurs transistorisés, n'émet pourtant pas de rayons mesurables si la haute tension est maintenue à un niveau préconisé dans la section "Vérification de la haute tension".
   C'est seulement quand la haute tension est excessive que les rayons X peuvent entrer dans l'enveloppe du tube-image y compris le conducteur de verre. Il est important de maintenir la haute tension en-dessous du niveau spécifié.
2. Il est essentiel que le réparateur ait sous la main un voltmètre à haute tension qui doit être périodiquement étalonné.
3. La haute tension doit toujours être maintenue à la valeur de régime -et pas plus haute. L'opération à des tensions plus élevées peut entraîner une panne du tube-image ou du circuit à haute tension et, dans certaines conditions, peut entraîner une radiation dépassant les niveaux préscrits.
4. Quand le régulateur à haute tension fonctionne correctement, il n'y a aucun problème de radiation X. Chaque fois qu'un châssis couleurs est réparé, la luminosité doit être examinée bout en contrôlant la haute tension à l'aide d'un voltmètre pour s'assurer que la haute tension ne dépasse pas la valeur spécifiée et qu'elle soit correctement réglée.
5. Ne pas utiliser un tube-image autre que celui spécifié et ne pas effectuer de modifications déconseillées du circuit à haute tension.
6. Lors de la recherche des pannes et des mesures d'essai sur un récepteur qui présente une haute tension excessive, éviter de s'approcher inutilement du récepteur.
   Ne pas faire fonctionner le récepteur plus longtemps que nécessaire pour localiser la cause de la tension excessive.

PRECAUTIONS A PRENDRE LORS DE LA REPARATION

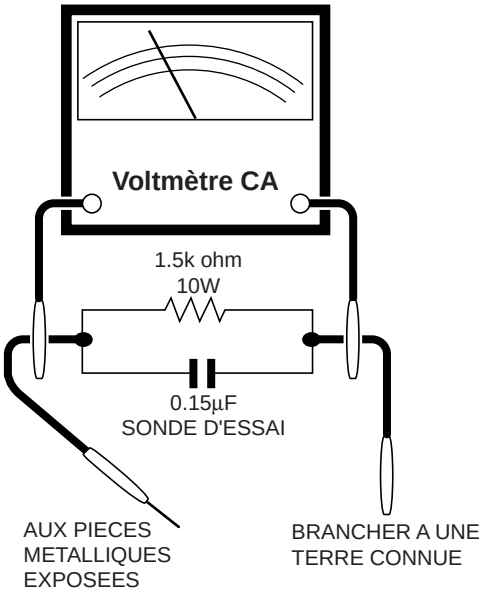
(Suite)

VERIFICATIONS CONTRE L'INCEN-DIE ET LE CHOC ELECTRIQUE

Avant de rendre le récepteur à l'utilisateur, effectuer les vérifications suivantes.

1. Inspecter tous les faisceaux de câbles pour s'assurer que les fils ne soient pas pincés ou qu'un outil ne soit pas placé entre le châssis et les autres pièces métalliques du récepteur.
2. Inspecter tous les dispositifs de protection comme les boutons de commande non-métalliques, les isolants, le dos du coffret, les couvercles ou blindages de réglage et de compartiment, les réseaux de résistance-capacité, les isolateurs mécaniques, etc.
3. S'assurer qu'il n'y ait pas de danger d'électrocution en vérifiant la fuite de courant, de la facon suivante:

- Brancher le cordon d'alimentation directem-ent à une prise de courant de 120V. (Ne pas utiliser de transformateur d'isolation pour cet essai).
- A l'aide de deux fils à pinces, brancher une résistance de 1,5 kW 10 watts en parallèle avec un condensateur de 0,15µF en série avec toutes les pièces métalliques exposées du coffret et une terre connue comme une conduite électrique ou une prise de terre branchée à la terre.
- Utiliser un voltmètre CA d'une sensibilité d'au moins 5000W/V pour mesurer la chute de tension en travers de la résistance.
- Toucher avec la sonde d'essai les pièces métalliques exposées qui présentent une voie de retour au châssis (antenne, coffret métallique, tête des vis, arbres de commande et des boutons, écusson, etc.) et mesurer la chute de tension CA en-travers de la résistance. Toutes les vérifications doivent être refaites après avoir inversé la fiche du cordon d'alimentation. (Si nécessaire, une prise d'adpatation non polarisée peut être utilisée dans le but de terminer ces vérifications.)
  Tous les courants mesurés ne doivent pas dépasser 0,5 mA.
  Dans le cas contraire, il y a une possibilité de choc électrique qui doit être supprimée avant de rendre le récepteur au client.

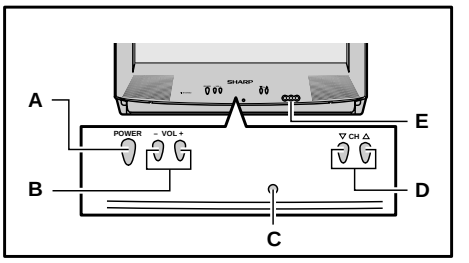


AVIS POUR LA SECURITE

De nombreuses pièces, électriques et mécaniques, dans les téléviseurs présentent des caractéristiques spéciales relatives à la sécurité, qui ne sont souvent pas évidentes à vue. Le degré de protection ne peut pas être nécessairement augmentée en utilisant des pièces de remplacement étalonnées pour haute tension, puissance, etc.
Les pièces de remplacement qui présentent ces caractéristiques sont identifiées dans ce manuel; les pièces électriques qui présentent ces particularités sont identifiées par la marque " ⚠ " et hachurées dans la liste des pièces de remplacement et les diagrammes schématiques.
Pour assurer la protection, ces pièces doivent être identiques à celles utilisées dans le circuit d'origine. L'utilisation de pièces qui n'ont pas les mêmes caractéristiques que les pièces recommandées par l'usine, indiquées dans ce manuel, peut provoquer des électrocutions, incendies, radiations X ou autres accidents.

LOCATION OF USER'S CONTROL

Front Panel



A POWER
Press → On.
Press again → Off.

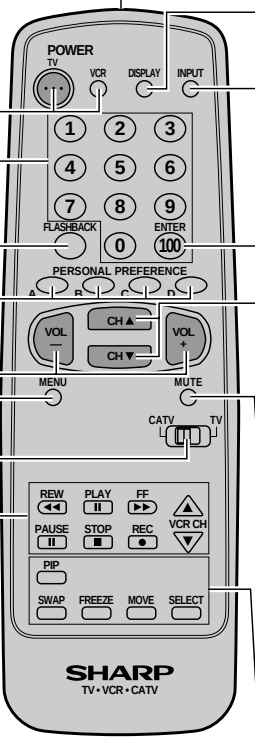
B VOLUME UP/DOWN
(+) Increases sound.
(–) Decreases sound.

C SENSOR AREA FOR REMOTE CONTROL

D CHANNEL UP/DOWN
(▲) Selects next higher channel.
(▼) Selects next lower channel.
• Press both at the same time to access the MAIN Menu screen.

E VIDEO/AUDIO IN 2 TERMINALS
(VIDEO/AUDIO terminals are also provided on the rear.)

Basic Remote Control Functions



POWER
Press → On.
Press again → Off.

REMOTE KEYPAD
Accesses any channel from keypad.

FLASHBACK
Returns to previous channel.

PERSONAL PREFERENCE
With the Personal Preference buttons, you can program your favorite programs by using the 4 categories A, B, C and D. The channels can be accessed quickly by using these buttons.

VOLUME UP/DOWN
(+) Increases sound.
(–) Decreases sound.
• In menu mode, changes or selects the TV adjustments.

MENU
Press → Accesses MAIN MENU.
Press again → Exits MAIN MENU.

TV-CATV MODE SELECT SWITCH
In TV position, sends power and channel select commands (Channel up/down and Random Access buttons) to the TV.
In CATV position, sends power and channel select commands to a cable TV converter.

VCR CONTROL

Infrared Transmitter Window

DISPLAY
Press → Displays receiving channel for 4 seconds.
Press again → Removes display.
• Temporarily displays receiving channel when in Closed Caption mode.

INPUT
Press → Switch to external video INPUT 1 mode.
Press again → Switch to external video INPUT 2 mode.
Press 3 times → Switch back to the original TV mode.

ENTER
Used in some instances where a VCR or Cable Converter Box requires an "enter" command after selecting channels, when using the REMOTE KEYPAD button.

CHANNEL UP/DOWN
(▲) Selects next higher channel.
(▼) Selects next lower channel.
• Moves the " ⬍ " mark of the MENU screens.

MUTE
Press → Mutes sound.
Press again → Restores sound.
• CLOSED CAPTION appears when sound is muted.

PIP FUNCTION
With the VIDEO inputs, you can watch two pictures at the same time.

Note:

- The above shaded buttons on the Remote Control glow in the dark. To use the glow-in-the-dark display on the remote control, place it under a fluorescent light or other lighting.
- The phosphorescent material contains no radioactive or toxic material, so it is safe to use.
- The degree of illumination will vary depending on the strength of lighting used.
- The degree of illumination will decrease with time and depending on the temperature.
- The time needed to charge the phosphorescent display will vary depending on the surrounding lighting.
- Sunlight and fluorescent lighting are the most effective when charging the display.

INSTALLATION AND SERVICE INSTRUCTIONS

Note: (1) When performing any adjustments to resistor controls and transformers use non-metallic screwdrivers or TV alignment tools.
(2) Before performing adjustments, the TV set must be on at least 15 minutes.

CIRCUIT PROTECTION

The receiver is protected by a 4.0A fuse (F701), mounted on PWB-A, wired into one side of the AC line input.

X-RADIATION PROTECTOR CIRCUIT TEST

After service has been performed on the horizontal deflection system, high voltage system, B+ system, test the X-Radiation protection circuit to ascertain proper operation as follows:

1. Apply 120V AC using a variac transformer for accurate input voltage.
2. Allow for warm up and adjust all customer controls for normal picture and sound.
3. Receive a good local channel.
4. Connect a digital voltmeter to TP653 and make sure that the voltmeter reads 11.4 ± 0.7V.
5. Apply external 13.8V DC at TP653 by using an external DC supply, TV must be shut off.
6. To reset the protector, unplug the AC cord and make a short circuit between TP651 and TP652. Now make sure that normal picture appears on the screen.
7. If the operation of the horizontal oscillator does not stop in step 5, the circuit must be repaired before the set is returned to the customer.

HIGH VOLTAGE CHECK

High voltage is not adjustable but must be checked to verify that the receiver is operating within safe and efficient design limitations as specified checks should be as follows:

1. Connect an accurate high voltage meter between ground and anode of picture tube.
2. Operate receiver for at least 15 minutes at 120V AC line voltage, with a strong air signal or a properly tuned in test signal.
3. Enter the service mode and select the service adjustment "S19" and Bus data "01" (Y-mute on).
4. The voltage should be approximately, 28.1kV (at zero beam).
   If a correct reading cannot be obtained, check circuitry for malfunctioning components. After the voltage test, make Y-mute off to the normal mode.

For adjustments of this model, the bus data is converted to various analog signals by the D/A converter circuit.

Note: There are still a few analog adjustments in this series such as focus and master screen voltage. Follow the steps below whenever the service adjustment is required. See "Table-B" to determine, if service adjustments are required.

1. Service mode

Before putting unit into the service mode, check that customer adjustments are in the normal mode. Use the reset function in the video adjustment menu to ensure customer controls are in their proper (reset) position.

2. Service number selection

Once in the service mode, press the Ch-up or Ch-down button on the remote controller or at the set. The service adjustment number will vary in increments of one, from "S01" to "P07". Select the item you wish to adjust.

3. Data number selection

Press the Vol-up or down button to adjust the data number.

To enter the service mode and exit service mode.

While pressing the Vol-up and Ch-up buttons at the same time, plug the AC cord into a wall socket.
Now the TV set is switched on and enters the service mode.
To exit the service mode, turn the television off by pressing the power button.

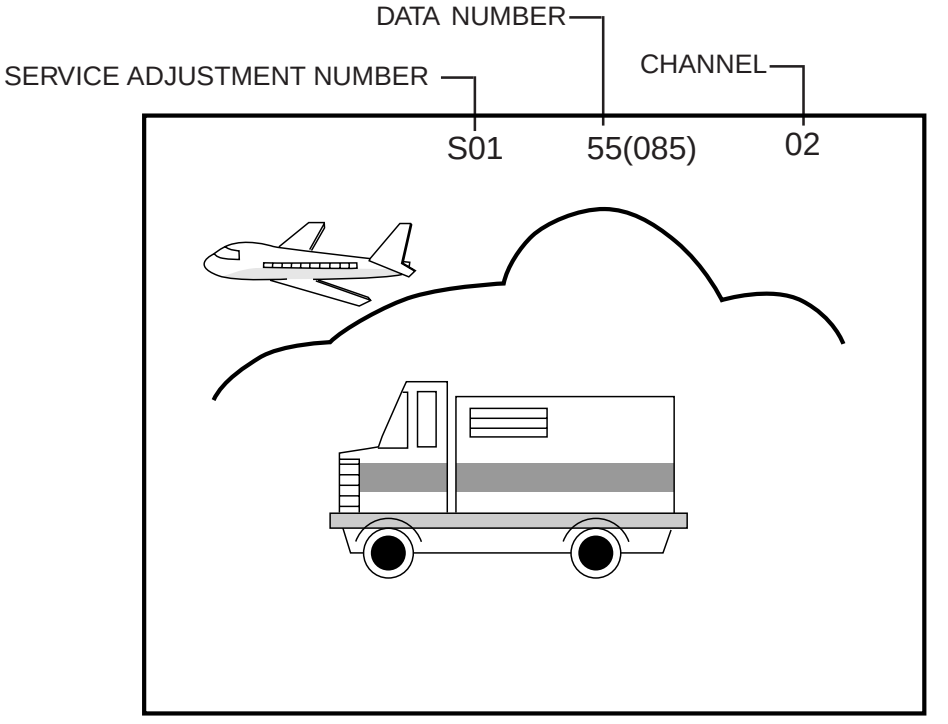


Figure A.

SERVICE NUMBER	ADJUSTMENT ITEM	DATA		ADJUSTMENT CONTENTS
		INITIAL VALUE	RANGE	
S01	PICTURE	55	00-7F	
S02	TINT	46	00-7F	
S03	COLOR	32	00-7F	
S04	BRIGHTNESS	40	00-7F	
S05	SHARPNESS	28	00-3F	Must be set to "24"
S06	VERTICAL PHASE	00	00-07	Must be set to "00"
S07	HORIZONTAL PHASE	12	00-1F	
S08	RF-AGC	23	00-3F	
S09	VERTICAL AMP	20	00-3F	
S10	PIF VCO	2C	00-7F	
S11	R CUT-OFF	00	00-FF	
S12	G CUT -OFF	00	00-FF	
S13	B CUT-OFF	00	00-FF	
S14	G GAIN	7F	00-FF	
S15	B GAIN	7F	00-FF	
S16	TRAP	00	00 or 01	Must be set to "01"
S17		20	00-3F	Must be set to "20"
S18	C.C.POSITION	17	00-FF	
S19	MUTE	00	00,01,03	"00"=Normal, "01"=No Y, "03"=No Vertical & No Y
S20	ENERGY SAVE OFFSET	20	00-3F	Must be set to "23"
S21	TIMER	7A	00-FF	Must be set to "7A"
S22		00	00	Must be set to "00"
S23	TUNER SETUP	00	00, 01	Must be set to "00"
OP1	OPTION1	00	00-FF	Must be set to "B7"
OP2	OPTION2	00	00-FF	Must be set to "A7"
M01	INPUT LEVEL	0A	00-0F	
M02	ST VCO	20	00-3F	
M03	FILTER	1C	00-3F	
M04	WIDE BAND	20	00-3F	
M05	SPECTRAL	1B	00-3F	
P01	P in P Y-LEVEL	30	00-7F	
P02	P in P TINT	29	00-3F	Must be set to "29"
P03	P in P COLOR	2E	00-7F	
P04	P in P Y-OFFSET	09	00-1F	Must be set to "09"
P05	P in P H-POSITION	0A	00-FF	Must be set to "0A"
P06	P in P BURST GATE PULSE	00	00-7F	Must be set to "00"
P07	P in P FREE RUN	0B	00-0F	Must be set to "0B"

Table - A

Holding down both the Vol-up/CH-down buttons on the TV set at service mode for more than 2 seconds will automatically write the above initial values into IC2101.

PART REPLACED	ADJUSTMENT		NOTES
	NECESSARY	UNNECESSARY	
IC2001		X	Data is stored in IC2101.
IC201	X		The adjustment is needed to compensate for characteristics of parts including IC201 and MTS level (M01).
IC2101	X		Holding down both the Vol-up/CH-down buttons on the TV set in the service mode for more than 2 seconds will automatically write the above initial values into IC2101. Then perform a complete adjustment.
CRT	X		Adjust items related to picture tube only.
IC3001	X		Adjust items related to MTS only (M01~M05).
IC1801	X		Adjust items related to P-IN-P only (P01~P07).

Table - B

■ SERVICE ADJUSTMENT

VCO Adjustment

1. Connect a digital voltmeter between pin (44) of IC201 and ground.
2. Receive a good local channel.
3. Enter the service mode and select the service adjustment "S10".
4. Adjust the data so that digital voltmeter reads 2.2V.
5. Adjustment is completed, remove the voltmeter, return to "normal" mode.

RF AGC Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S08".
3. Set the data value to point where no noise or beat appears.
4. Select another channel to confirm that no noise or beat appears.
   Note 1: You will have to come out of the service mode to select another channel.
   Note 2: Setting the data to "00" will produce a black raster.

Screen Adjustment

1. Connect a digital voltmeter between TP852 and TP853 on the CRT Unit.
   Note: These test points may not be provided. Then connect the voltmeter to both ends of R852 located near Q851 on the foil side.
2. Receive a good local channel.
3. Enter the service mode and select the service adjustment "S03" and set the data value to "00" to set the color level to minimum. (Record original data code under adjustment "S03" before changing) You may skip this step, if you selected a B/W picture or monoscope pattern.
4. Select the service adjustment "S19" and adjust the data value to "01", this turn off the luminance signal (Y-mute).
5. Select the service adjustment "S04" and adjust data value to obtain 0.26 volts on the digital voltmeter.
6. Adjust the master screen control until the raster darkens to the point where raster is barely seen.
7. Adjust the service adjustments "S11" red, "S12" green and "S13" blue to obtain a good grey scale with normal whites at low brightness level.
8. Select the service adjustment "S19" and reset data to "00". Select the service adjustment "S03" and reset data to obtain normal color level.
9. Remove digital voltmeter, and reset the master screen control to obtain normal brightness range.

White Balance Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S03" and set to "00" (minimum color)(Record original data code under adjustment "S03" before changing). "S03" does not have to be adjusted, if you selected a B/W picture or monoscope pattern.
3. Alternately adjust the service adjustment data of "S14" and "S15" until a good grey scale with normal whites is obtained.
4. Select the service adjustment "S03" and adjust data to obtain normal color level.

Sub-Picture Adjustment

1. Receive a good local channel.
2. Make sure the customer picture control is set to maximum.
3. Enter the service mode and select the service adjustment "S01".
4. Adjust the data value to achieve normal contrast range.

Sub-Tint Adjustment

1. Receive a good local channel.
2. Set customer tint control to center of it's range.
3. Enter the service mode and select the service adjustment "S02".
4. Adjust "S02" data value to obtain normal flesh tones.

Sub-Color Adjustment

1. Receive a good local channel.
2. Make sure the customer color control is set to center position .
3. Enter the service mode and select service adjustment "S03".
4. Adjust "S03" data value to obtain normal color level.

Sub-Brightness Adjustment

1. Receive a good local channel.
2. Make sure the customer brightness control is set to center position.
3. Enter the service mode and select the service adjustment "S04".
4. Adjust "S04" data value to obtain normal brightness level.

Vertical-Size Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S09".
3. While observing the top and bottom of the screen, adjust "S09" data value to proper vertical size.

Vertical Phase Adjustment

1. Enter the service mode and select the service adjustment "S06".
2. Adjust data value to "00".

Note: This must be set "00" when changed data retrace line will appear.

Horizontal Position Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S07".
3. Adjust "S07" data value so that picture is centered.

Caption Position Adjustment (Horizontal)

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S18".
3. A black text box appears on the screen. (see **Figure B.** below)
4. Adjust "S18" data value so that text box is positioned in the center of the screen.

3.58MHz Trap Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S16".
3. This is a two position adjustment, "00" is ON, "01" is OFF.
4. Adjust data value to "01" for normal viewing.

Sharpness Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustments "S05" for sharpness and "S17" for balance.

- **Sharpness Adjustment**

3. Adjust data value to "24"(center of data range) for sharpness adjustment.

Energy save offset Adjustment

1. Enter the service mode and select the service adjustment "S20".
2. Adjust data value to "23".

Note: This position is used to preset the level for the energy save function.

Other Adjustments

1. Enter the service mode.
2. Adjust the following data values as listed below.

SERVICE POSITION	ADJUST ITEM	DATA (Hex)
S05	SHARPNESS	24
S06	V-PHASE	00
S16	TRAP	01
S20	E-SAVE	23
S21	TIMER	7A
S23	TUNER SETUP	00
OP1	OPTION1	B7
OP2	OPTION2	A7

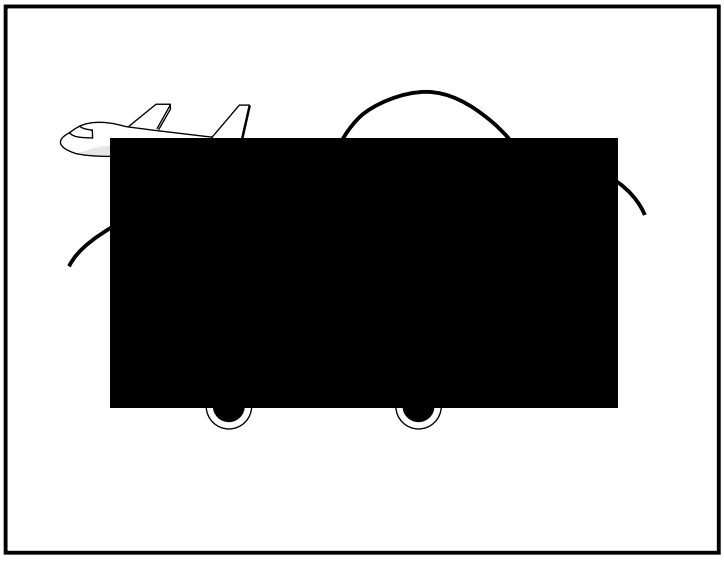


Figure B.

■ MTS ADJUSTMENT

MTS Level Adjustment

1. Feed the following monaural signal to pin (14) of IC3001.
   Monaural signal : 300Hz, 245mVrms
2. Connect the rms voltmeter to pin (39) of IC3001.
3. Enter the service mode and select the service adjustment "M01".
4. Adjust the data so that the rms voltmeter reads 490 ± 10mVrms.

MTS VCO Adjustment

1. Keep the unit in no-signal state.
2. Connect the frequency counter to pin (39) of IC3001.
3. Connect a capacitor (100µF, 50V) in between positive(+) side of C3005 and ground.
4. Enter the service mode and select the service adjustment "M02"
5. Adjust the data so that the frequency counter reads 62.94 ± 0.75kHz.

Filter Adjustment

1. Feed the following stereo pilot signal to pin (14) of IC3001 .
   Stereo pilot signal: 9.4kHz, 600mVrms.
2. Enter the service mode and select the service adjustment "M03".
3. Adjust the data at the point where "OK" appears on the screen. The "OK" represents the approximate center of the adjustable range of the data.

Separation Adjustment

1. Connect the rms voltmeter to pin (39) of IC3001.
2. Receive the following composite stereo signal 1.
   Composite stereo signal: 30% modulation, left channel only, noise reduction on, 300Hz
3. Enter the service mode and select the service adjustment "M04".
4. Adjust the data until the AC voltage reading of the rms voltmeter is minimum.
5. Receive the following composite stereo signal 2.
   Stereo signal: 30% modulation, left channel only, noise reduction on, 3kHz
6. Enter the service mode and select the service adjustment "M05".
7. Adjust the data until the AC voltage reading of the rms voltmeter is minimum.
8. Take the above steps 1 thru 7 again for fine adjustment.

■ P-IN-P ADJUSTMENT

P-IN-P Y LEVEL Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "P01".
3. Adjust "P01" data value to obtain normal contrast level.

P-IN-P TINT Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "P02".
3. Adjust data value to "29".

P-IN-P COLOR Adjustment

1. Receive a good local channel.
2. Make sure the customer color control is set to center position.
3. Enter the service mode and select the service adjustment "P03".
4. Adjust "P03" data value to obtain normal color level.

P-IN-P Y-OFF SET Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "P04".
3. Adjust data value to "09".

P-IN-P H-POSITION Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "P05".
3. Adjust data value to "0A".

P-IN-P BURST GATE PULSE (for MAIN)

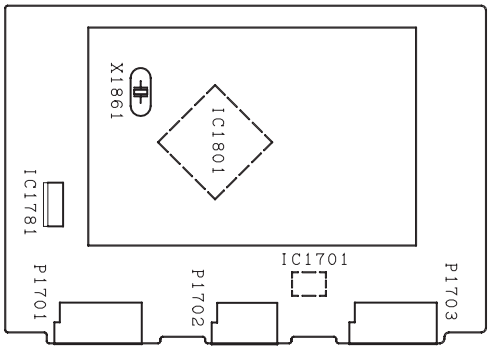
1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "P06".
3. Adjust data value to "00".

P-IN-P TREE RUN

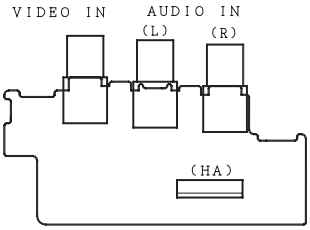
1. Recieve a good local channel.
2. Enter the service mode and select the service adjustment "P07".
3. Adjust data value to "0B".

CHASSIS LAYOUT

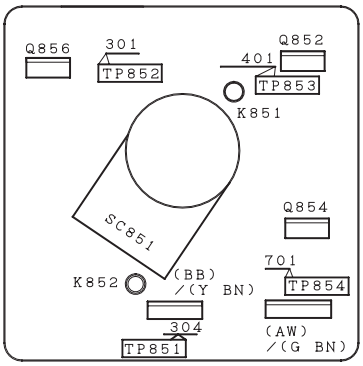
PWB-R



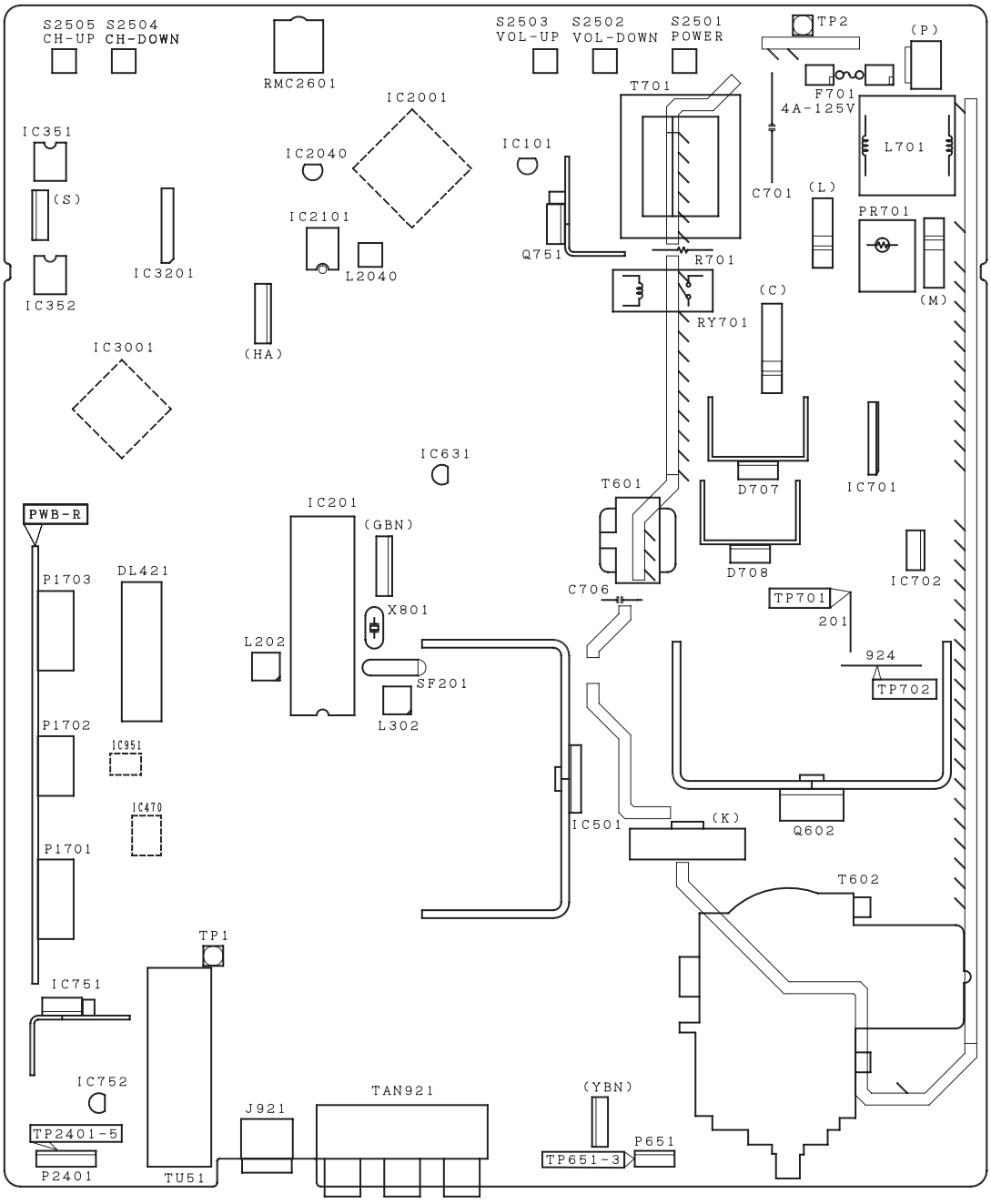
PWB-H



PWB-B

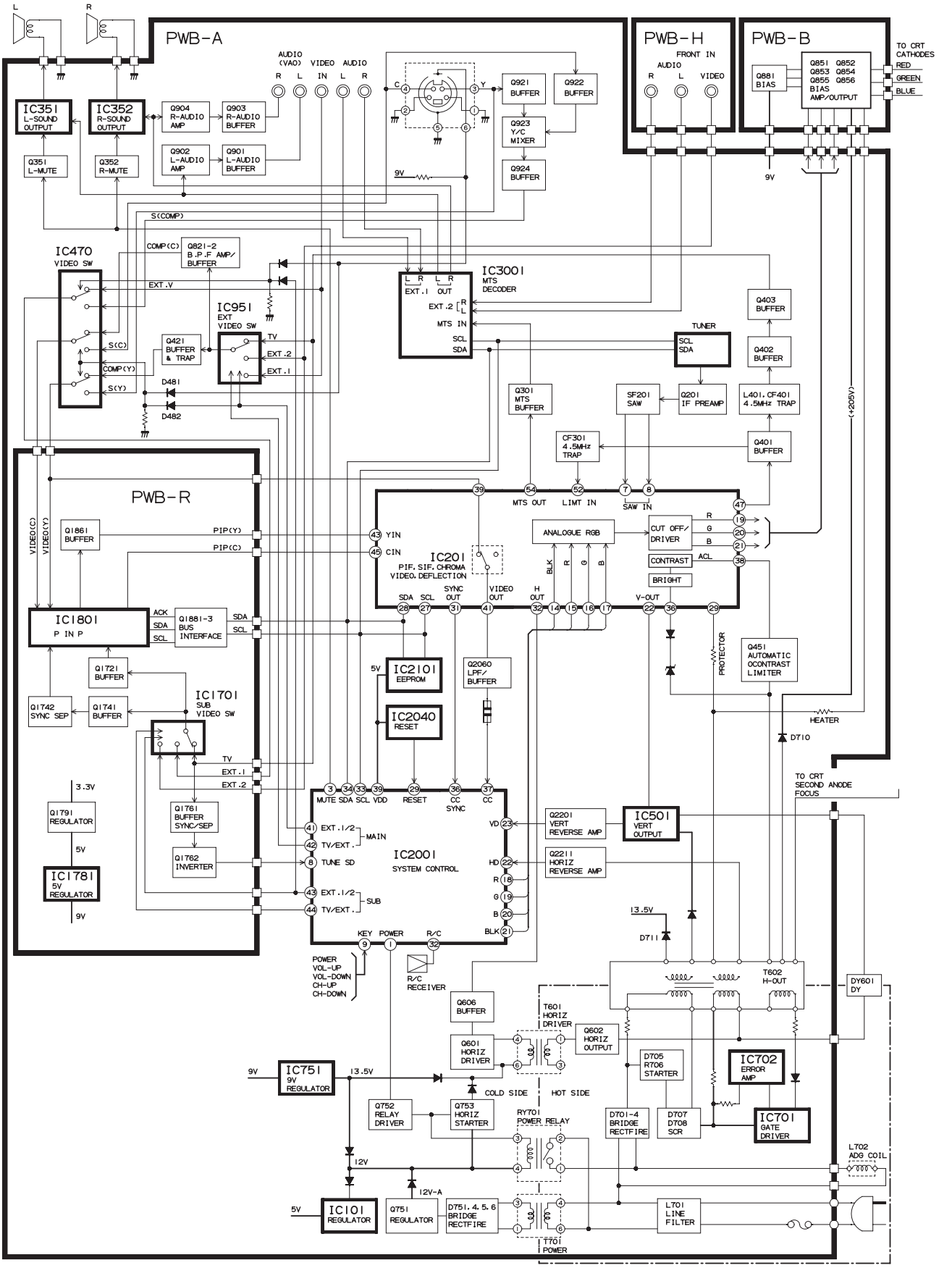


PWB-A



1	2	3	4	5	6

BLOCK DIAGRAM



DESCRIPTION OF SCHEMATIC DIAGRAM

NOTES:

1. *The unit of resistance "ohm" is omitted. (K=kΩ=1000Ω, M=MΩ)*
2. *All capacitors are μ F, unless otherwise noted. (P=pF=μμF)*
3. *(G) indicates ±2% tolerance may be used.*
4. *⏚ indicates line isolated ground.*

VOLTAGE MEASUREMENT CONDITIONS:

1. *All DC voltages are measured with DVM connected between points indicated and chassis ground, line voltage set at 120V AC and all controls set for normal picture unless otherwise indicated.*
2. *All voltages measured with 1000μ V B & W or Color signal.*

WAVEFORM MEASUREMENT CONDITIONS:

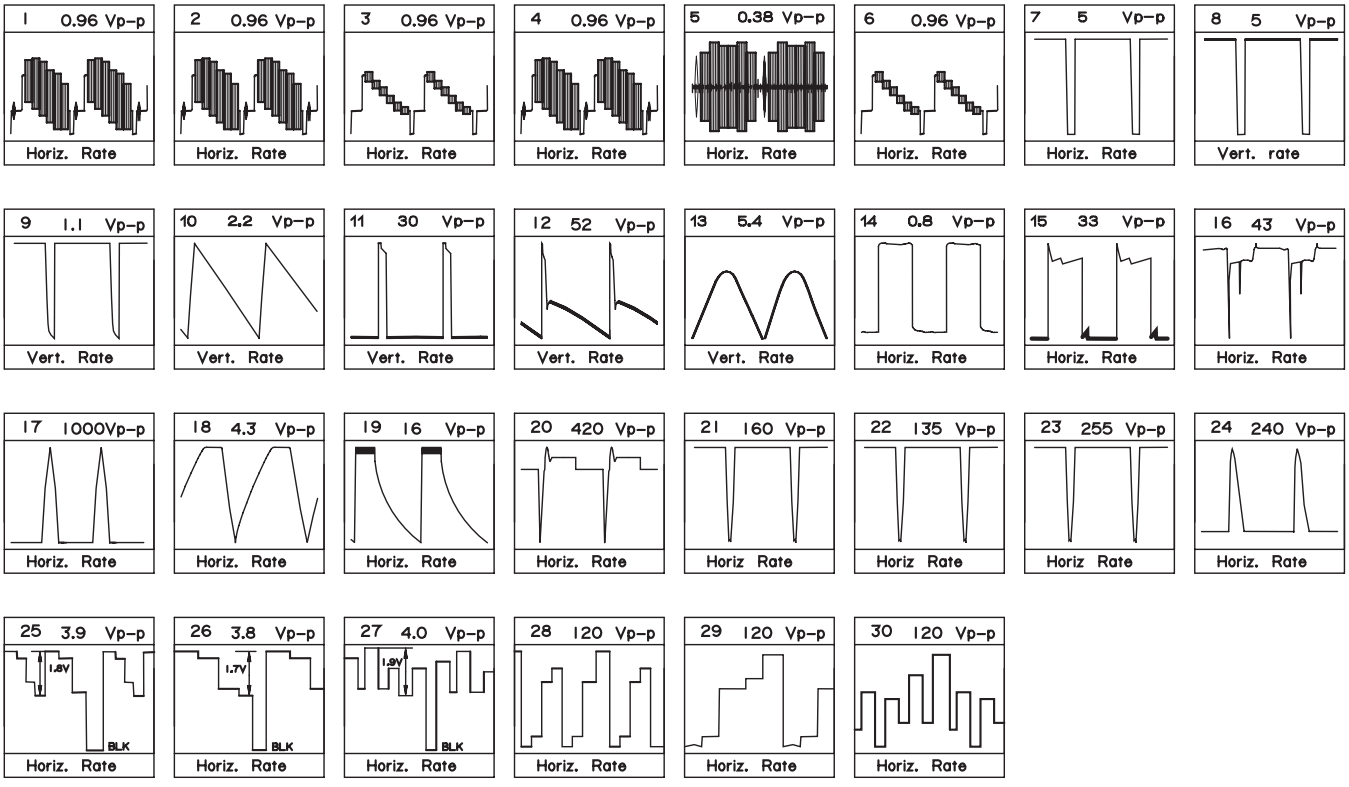
1. *Photographs taken on a standard gated color bar signal, the tint setting adjusted for proper color. The wave shapes at the red, green and blue cathodes of the picture tube depend on the tint, color level and picture control.*
2. *indicates waveform check points (See chart, waveforms are measured from point indicated to chassis ground.)*

⚠ AND SHADED ( ) COMPONENTS = SAFETY RELATED PARTS.
▲ MARK= X-RAY RELATED PARTS.

DRGANNES MARQUES ⚠ ET HACHRES ( ): PIECES RELATIVES A LA SECURITE.
MARQUE ▲ : PIECS RELATIVE AUX RAYONS X.

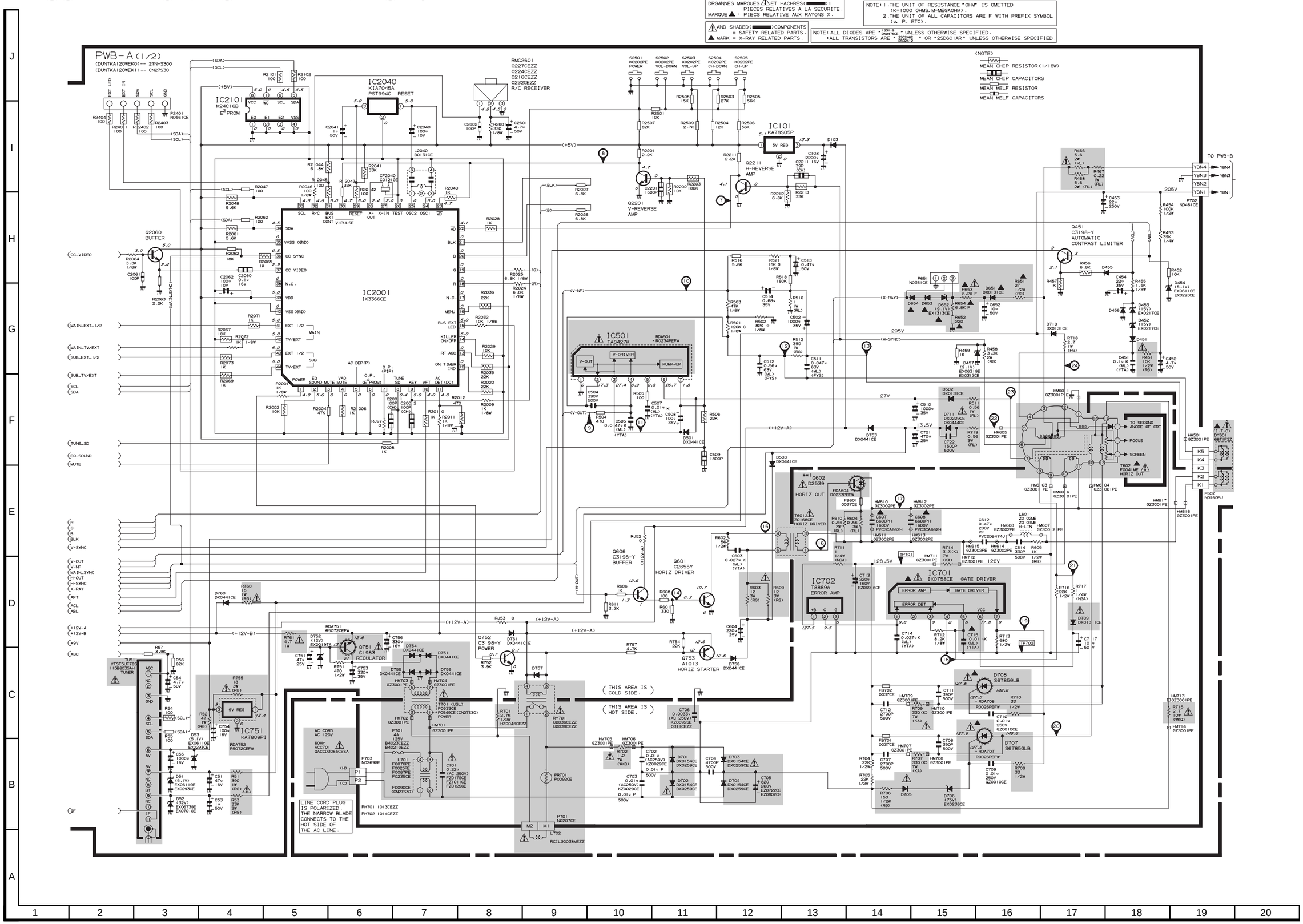
This circuit diagram is a standard one, printed circuits may be subject to change for product improvement without prior notice.

WAVEFORMS



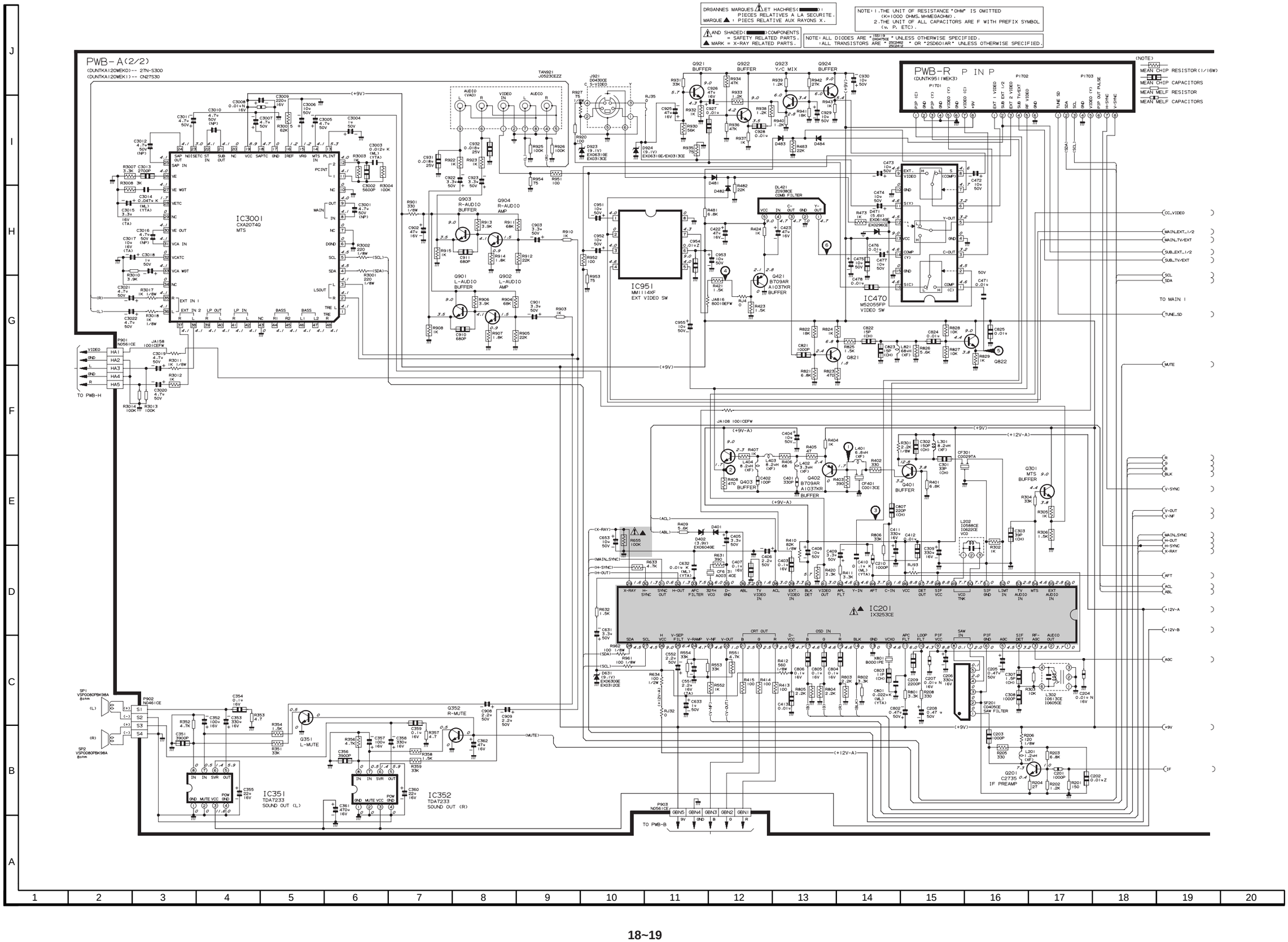
27N-S300
CN27S30

SCHEMATIC DIAGRAM: MAIN-1 Unit



27N-S300
CN27S30

SCHEMATIC DIAGRAM: MAIN-2 Unit



27N-S300
CN27S30

SCHEMATIC DIAGRAM: P-IN-P Unit

DRGANNES MARQUES ⚠ ET HACHRES( ): PIECES RELATIVES A LA SECURITE.
MARQUE ▲ : PIECS RELATIVE AUX RAYONS X.

⚠ AND SHADED( ) COMPONENTS = SAFETY RELATED PARTS.
▲ MARK = X-RAY RELATED PARTS.

NOTE: 1.THE UNIT OF RESISTANCE "OHM" IS OMITTED (K=1000 OHMS, M=MEGAOHM).
2.ALL RESISTORS ARE 1/16 WATT.UNLESS OTHERWISE NOTED.
3.UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL (u, P, ETC).

NOTE: ALL DIODES ARE " 1SS119 / DX0475CE " UNLESS OTHERWISE SPECIFIED.
: ALL TRANSISTORS ARE " 2SC2412 / 2SC2462 " OR "2SD601AR" UNLESS OTHERWISE SPECIFIED.

PWB-R
(DUNTK951WEK3)

SLD1801
0012MEFW

IC1801
M65667FP
PIP

IC1781
KA7805PI
5V REG.

IC1701
MM1117XF
SUB
VIDEO SW

Q1861
B709AR
A1037KR
BUFFER

Q1721
BUFFER

Q1741
B709AR
A1037KR
BUFFER

Q1761
B709AR
A1037KR
BUFFER

Q1742
B709AR
A1037KR
INVERTER

Q1762
B709AR
A1037KR
INVERTER

Q1881
BUS
INTERFACE

Q1883
BUS
INTERFACE

Q1882
BUS
INTERFACE

Q1791
C1959Y
REGULATOR

D1821

D1801

D1791
4.3V
EX0604GE

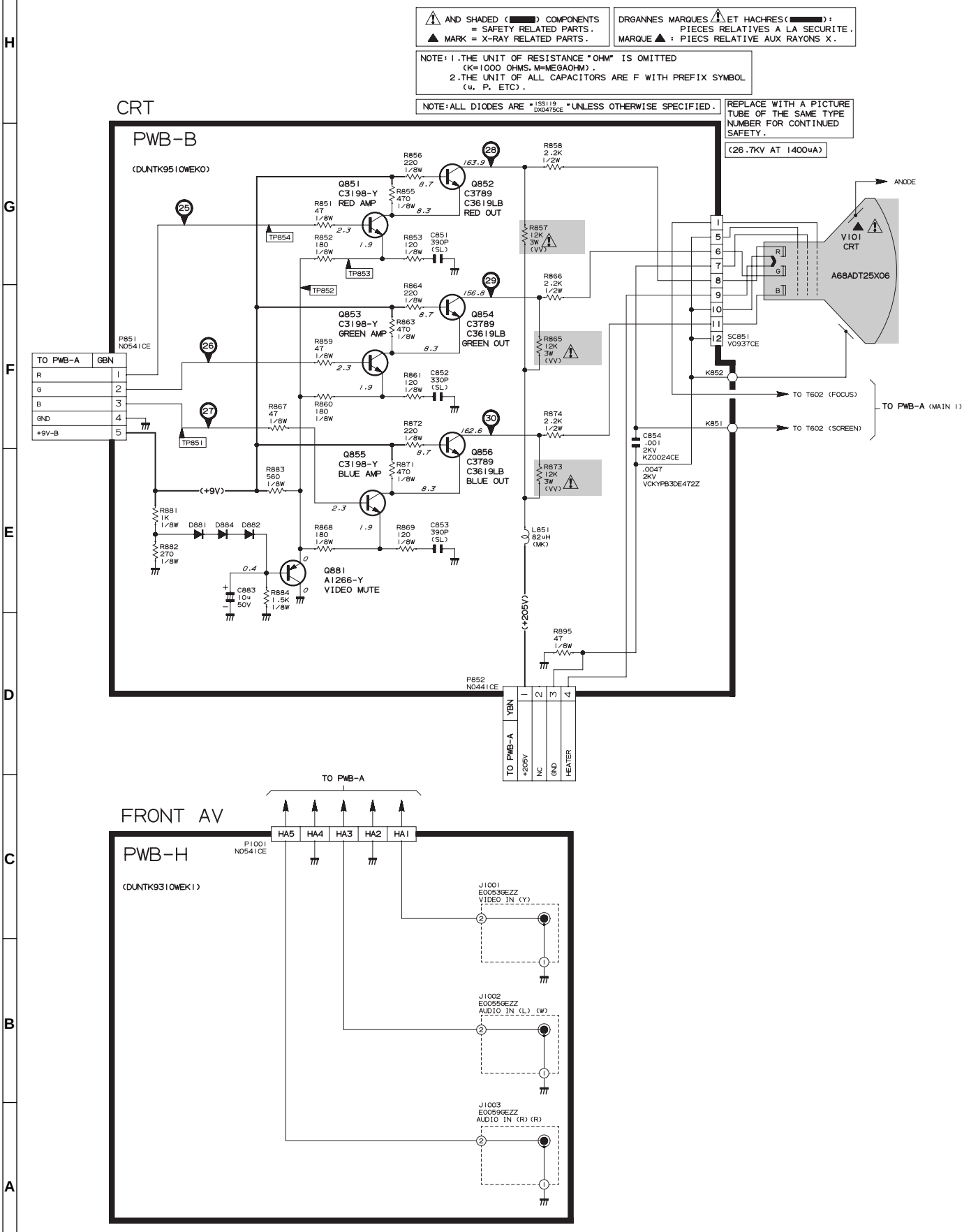
(CHIP)
RJ1
RJ2
RJ4
RJ5
RJ6
RJ7
RJ8
RJ9
RJ10

P1701
Z0810CE
TO PWB-A
PIP (C)
GND
PIP (Y)
GND
VIDEO (Y)
GND
VIDEO (C)
+9V

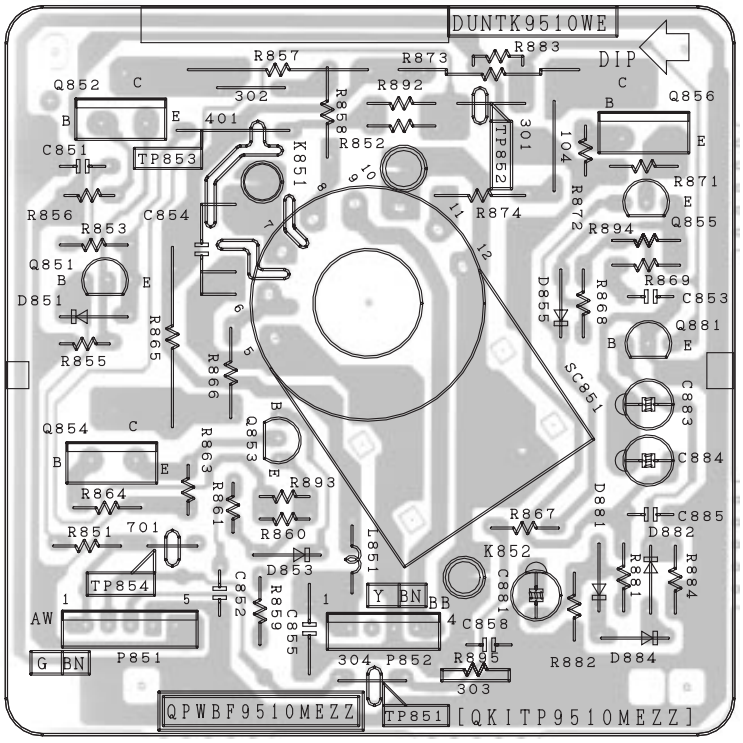
P1702
Z0610CE
TO PWB-A
EXT. 1 VIDEO
SUB EXT. 1/2
EXT. 2 VIDEO
SUB TV/EXT.
RF VIDEO
GND

P1703
Z0810CE
TO PWB-A
TUNE SD
SDA
SCL
GND
VIDEO (Y)
HD
VD

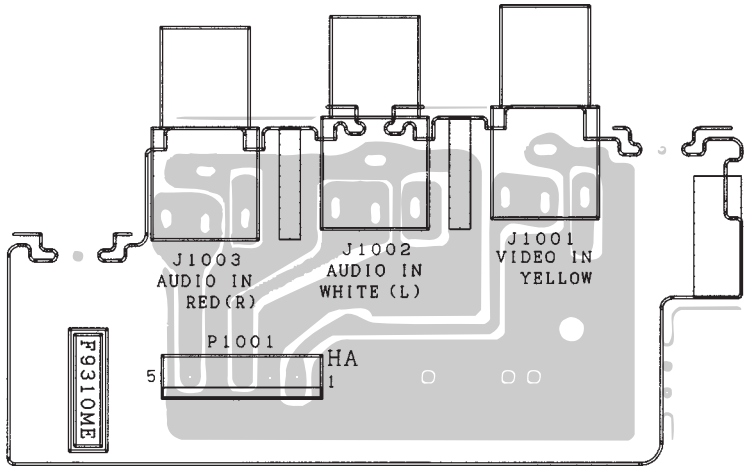
SCHEMATIC DIAGRAM: CRT and FRONT AV Units



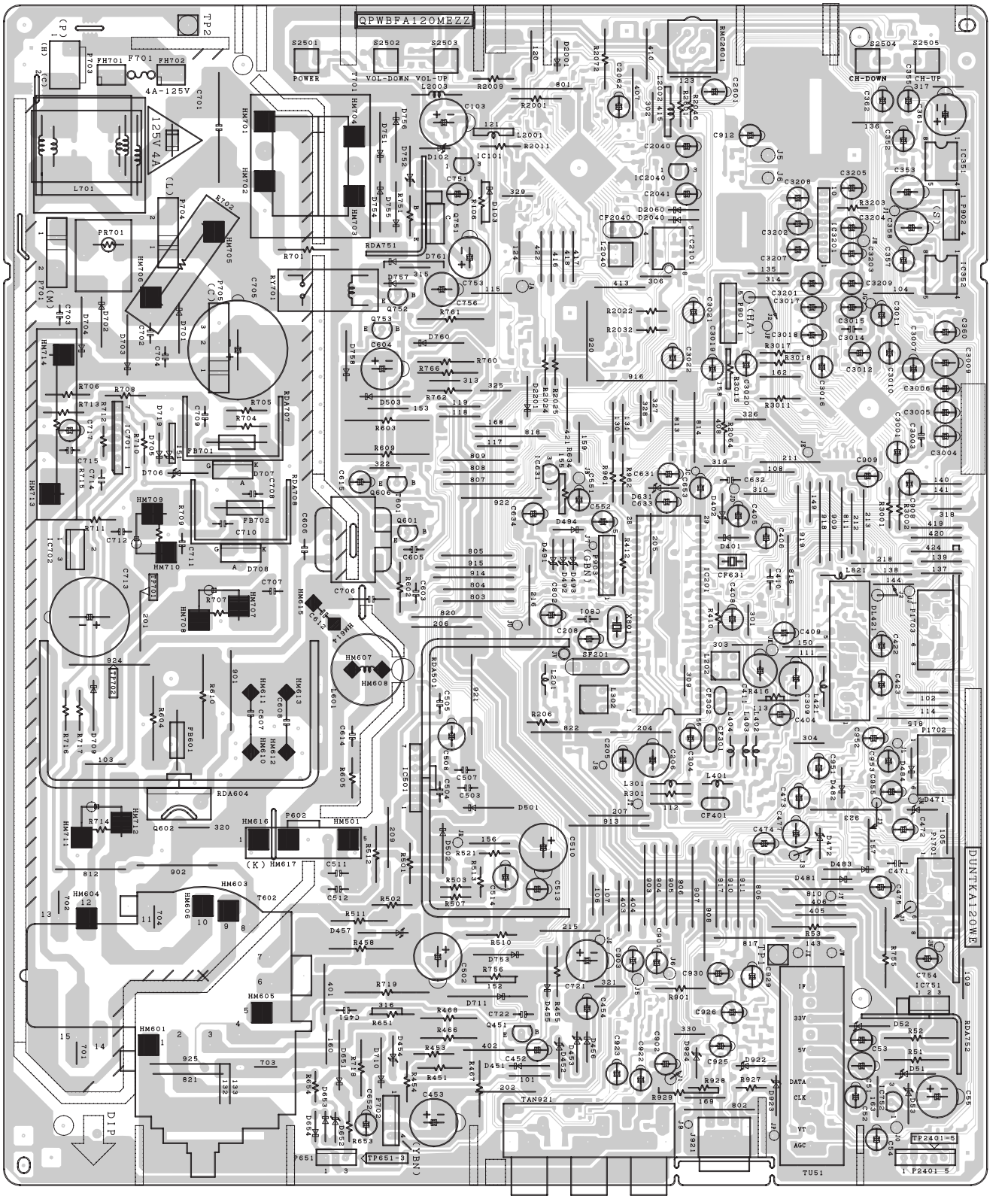
PRINTED WIRING BOARD ASSEMBLIES



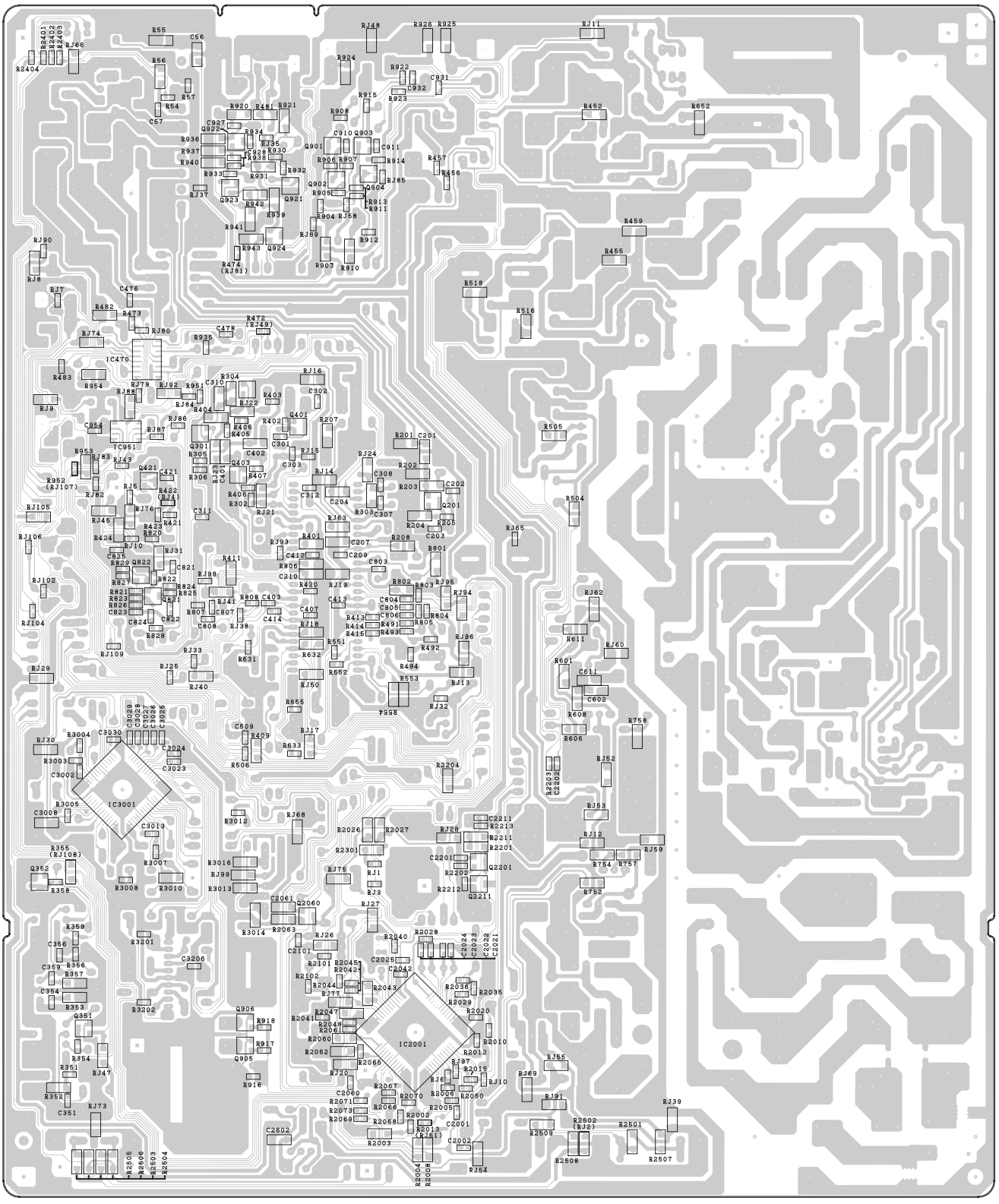
PWB-B: CRT Unit (Wiring Side)



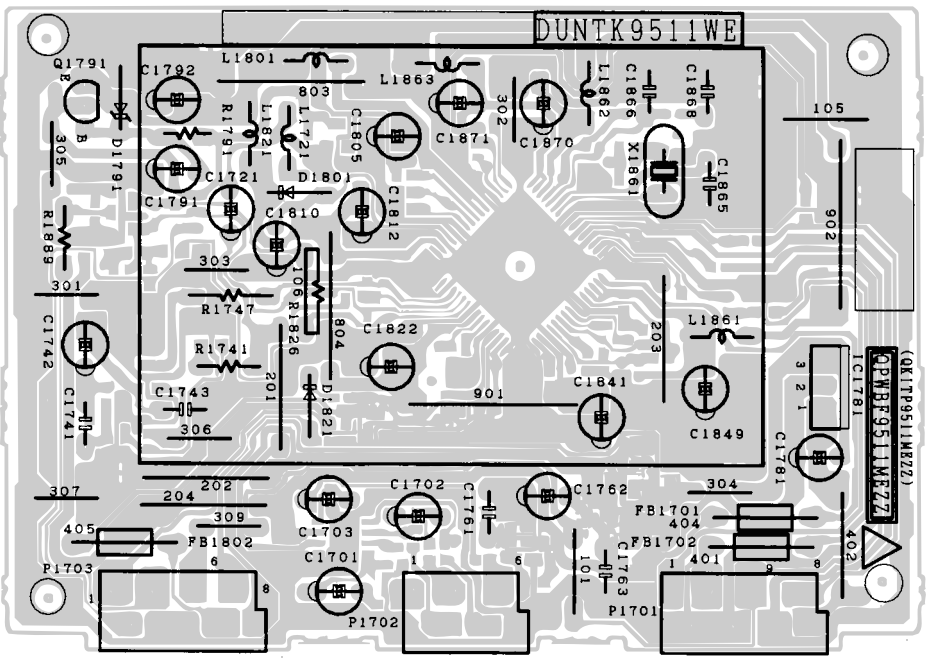
PWB-H: FRONT AV Unit (Wiring Side)



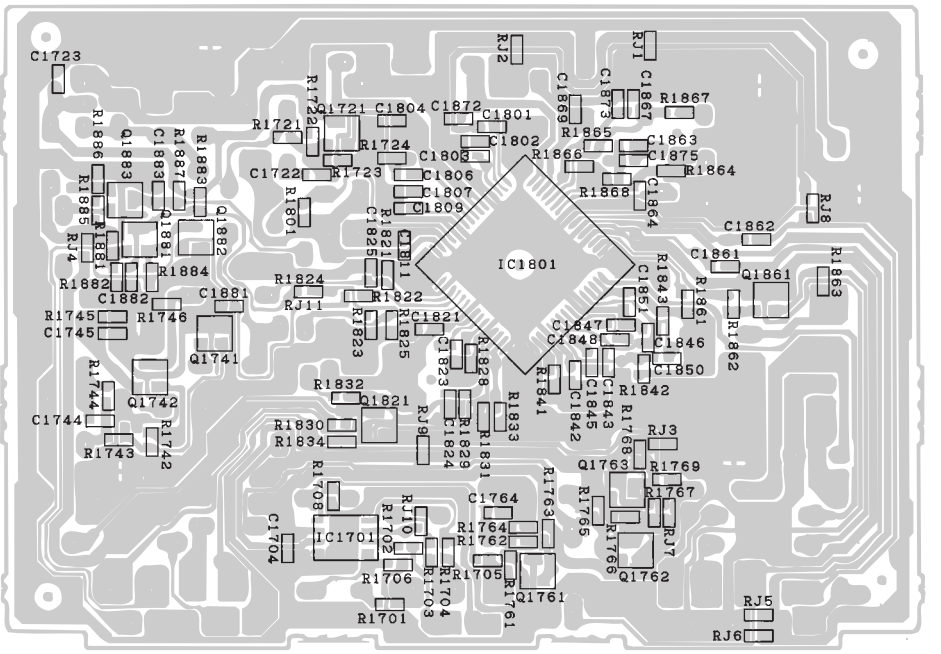
PWB-A: MAIN Unit (Wiring Side)



PWB-A: MAIN Unit (Chip Parts Side)



PWB-R : P-IN-P Unit (Wiring Side)



PWB-R : P-IN-P Unit (Chip Parts Side)

PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual; electrical components having such features are identified by ⚠ and shaded areas in the Replacement Parts Lists and Schematic Diagrams. The use of a substitute replacement part which dose no have the same safety characteristic as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

in **USA**: Contact your nearest SHARP Parts Distributor to order. For location of SHARP Parts Distributor, Please call Toll-Free; 1-800-BE-SHARP

★ MARK: SPARE PARTS-DELIVERY SECTION

▲ MARK: X- RAY RELATED PARTS

LISTE DES PIECES

CHANGE DES PIECES

Les pi`eces de rechange qui pr élelesentent ces caract éleristiques sp éleciales de s élecurit éle, sont identifi élees dans ce manuel : les pi`eces élelectriques qui pr élesentent ces particularit éles, sont rep éler élee par la marque ⚠ et sont hachur élees dans les listes de pi`eces et dans les diagrammes sch élematiques.
La substitution d'une pi`ece de rechange par une autre qui ne pr éLesente pas les m éoemes caract éLeristiques de s élecurit éle que la pi`ece recommand élee parl'usine et dans ce manuel de service, peut provoquer une éLelectrocution, un incendie ou toutautre sinistre.

"COMMENT COMMANDER LES PIECES DE RECHANGE"

Pour que votre commande soit rapidement et correctement remplie, veuillez fournir les renseignements suivants.

1. NUMERO DU MODELE
2. NO. DE REF
3. NO. DE PIECE
4. DESCRIPTION

in **CANADA**: Contact SHARP Electronics of Conada Limited Phone (416) 890-2100

★MARQUE: SECTION LIVRAISON DES PIECES DE RECHANGE

▲ MARQUE: PIECES RELATIVE AUX RAYONS X

PICTURE TUBE

Ref. No.	Part No.	★	Description	Code
▲⚠ V101	VB68ADT2506*S	M	Picture Tube (I.T.C.)	CP
⚠ L702	RCiLG0038MEZZ	M	Degaussing Coil (PR701:P0092CE)	AP
	MSPRT0002MEZZ	M	Spring for CRT	AA
	QEARC2702MEZZ	M	Grounding Part	AD

PRINTED WIRING BOARD ASSEMBLIES *(NOT REPLACEMENT ITEM)*

PWB-A	DUNTKA120WEK0	–	Main Unit (27N-S300)	—
PWB-A	DUNTKA120WEK1	–	Main Unit (CN27S30)	—
PWB-B	DUNTK9510WEK0	–	CRT Unit	—
PWB-H	DUNTK9310WEK1	–	Front AV Unit	—
PWB-R	DUNTK9511WEK3	–	P-IN-P Unit	—

PWB-A: DUNTKA120WEK0/1

MAIN UNIT

TUNER

NOTE: THE PARTS HERES SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENEDENTLY.

Ref. No.	Part No.	★	Description	Code
⚠ TU51	VTUVTST5UF78S or VTU115B8035AH	J	Tuner	BD

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC101	VHiKA78S05P-1	J	KA78S05P	AD
▲⚠ IC201	RH-iX3253CEZZ	J	TA1268AN	AV
IC351	VHiTDA7233/-1	J	TDA7233	AF
IC352	VHiTDA7233/-1	J	TDA7233	AF
IC470	VHiM52055FP-1	J	M52055FP	AH
⚠ IC501	VHiTA8427K/-1	J	TA8427K	AL
▲⚠ IC701	RH-iX0758CEZZ	J	T8150	AF
⚠ IC702	VHiT8889A//-1	J	T8889A	AL
⚠ IC751	VHiKA7809Pi-1	M	KA7809PI	AE
IC951	VHiMM1114XF1E	M	MM1114XFBE	AE
IC2001	RH-iX3366CEZZ	M	TMPA8700CPF164	AT
IC2040	VHiKiA7045A-1 or VHiPST994C/-1	J	KA7045AP	AE
IC2101	VHiM24C16B/-1	J	M24C16-BN6	AG
IC3001	VHiCXA2074Q-1	J	CXA2074Q	AY

TRANSISTORS

You can substitute “VS2SC2462-C-1” or “VS2SC2412-C-1” for “VS2SD601AR/-1”.

Q201	VS2SC2735//1E	J	2SC2735	AC
Q301	VS2SD601AR/-1	J	2SD601AR	AC
Q351	VS2SD601AR/-1	J	2SD601AR	AC
Q352	VS2SD601AR/-1	J	2SD601AR	AC
Q401	VS2SD601AR/-1	J	2SD601AR	AC
Q402	VS2SB709AR/-1 or VS2SA1037KR-1	J	2SB709AR	AC

PWB-A: DUNTKA120WEK0/1
MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
Q403	VS2SD601AR/-1	J	2SD601AR	AC
Q421	VS2SB709AR/-1 or VS2SA1037KR-1	J	2SB709AR	AC
Q451	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q601	VS2SC2655Y/-1	J	2SC2655Y	AE
⚠ Q602	VS2SD2539//1E	J	2SD2539	AP
Q606	VS2SC3198-Y-1	J	2SC3198(Y)	AA
⚠ Q751	VS2SC1983//-2	J	2SC1983	AF
Q752	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q753	VS2SA1013//1E	J	2SA1013	AD
Q821	VS2SD601AR/-1	J	2SD601AR	AC
Q822	VS2SD601AR/-1	J	2SD601AR	AC
Q901	VS2SD601AR/-1	J	2SD601AR	AC
Q902	VS2SD601AR/-1	J	2SD601AR	AC
Q903	VS2SD601AR/-1	J	2SD601AR	AC
Q904	VS2SD601AR/-1	J	2SD601AR	AC
Q921	VS2SD601AR/-1	J	2SD601AR	AC
Q922	VS2SD601AR/-1	J	2SD601AR	AC
Q923	VS2SD601AR/-1	J	2SD601AR	AC
Q924	VS2SD601AR/-1	J	2SD601AR	AC
Q2060	VS2SD601AR/-1	J	2SD601AR	AC
Q2201	VS2SD601AR/-1	J	2SD601AR	AC
Q2211	VS2SD601AR/-1	J	2SD601AR	AC

DIODES

You can substitute “RH-DX0475CEZZ” for “VHD1SS119//-1”.

D51	RH-EX0611GEZZ or RH-EX0293CEZZ	J	Zener Diode, 5.1V	AA
D52	RH-EX0673GEZZ or RH-EX0701GEZZ	J	Zener Diode, 32V	AB
D53	RH-EX0611GEZZ or RH-EX0293CEZZ	J	Zener Diode, 5.1V	AA
D103	VHD1SS119//-1	J	1SS119	AB
D401	VHD1SS119//-1	J	1SS119	AB
D402	RH-EX0604GEZZ	J	Zener Diode, 3.9V	AB
D451	VHD1SS119//-1	J	1SS119	AB
D452	RH-EX0217CEZZ	J	Zener Diode, 15V	AB
D453	RH-EX0217CEZZ	J	Zener Diode, 15V	AB
D454	RH-EX0611GEZZ or RH-EX0293CEZZ	J	Zener Diode, 5.1V	AA
D455	VHD1SS119//-1	J	1SS119	AB
D456	VHD1SS119//-1	J	1SS119	AB
D457	RH-EX0631GEZZ or RH-EX0313CEZZ	J	Zener Diode, 9.1V	AA
D471	RH-EX0614GEZZ or RH-EX0296CEZZ	J	Zener Diode, 5.6V	AA
D481	VHD1SS119//-1	J	1SS119	AB
D482	VHD1SS119//-1	J	1SS119	AB
D483	VHD1SS119//-1	J	1SS119	AB
D484	VHD1SS119//-1	J	1SS119	AB
D501	RH-DX0441CEZZ	J	Diode	AC
⚠ D502	RH-DX0131CEZZ	J	Diode	AC
D503	RH-DX0441CEZZ	J	Diode	AC
D631	RH-EX0630GEZZ or RH-EX0312CEZZ	J	Zener Diode, 9.1V	AA
▲⚠ D651	RH-DX0131CEZZ	J	Diode	AC
▲⚠ D652	RH-EX1313CEZZ	J	Zener Diode, 9.1V	AD
▲⚠ D653	VHD1SS119//-1	J	1SS119	AB
▲⚠ D654	VHD1SS119//-1	J	1SS119	AB
⚠ D701	RH-DX0154CEZZ or RH-DX0259CEZZ	J	Diode	AC
⚠ D702	RH-DX0154CEZZ or RH-DX0259CEZZ	J	Diode	AC
⚠ D703	RH-DX0154CEZZ or RH-DX0259CEZZ	J	Diode	AC
⚠ D704	RH-DX0154CEZZ or RH-DX0259CEZZ	J	Diode	AC
⚠ D705	VHD1SS119//-1	J	1SS119	AB
⚠ D706	RH-EX0238CEZZ	J	Zener Diode, 75V	AC
▲⚠ D707	VHSS6785GLB2E	J	Si.Control Rectifier	AL
▲⚠ D708	VHSS6785GLB2E	J	Si.Control Rectifier	AL
⚠ D709	RH-DX0131CEZZ	J	Diode	AC
D710	RH-DX0131CEZZ	J	Diode	AC
⚠ D711	RH-DX0229CEZZ or RH-DX0444CEZZ	J	Diode	AF
⚠ D751	RH-DX0441CEZZ	J	Diode	AC
D752	RH-EX0019TAZZ	J	Zener Diode, 12V	AB
D753	RH-DX0441CEZZ	J	Diode	AC
⚠ D754	RH-DX0441CEZZ	J	Diode	AC
⚠ D755	RH-DX0441CEZZ	J	Diode	AC
⚠ D756	RH-DX0441CEZZ	J	Diode	AC
D757	VHD1SS119//-1	J	1SS119	AB
D758	RH-DX0441CEZZ	J	Diode	AC
D760	RH-DX0441CEZZ	J	Diode	AC
D761	RH-DX0441CEZZ	J	Diode	AC
D923	RH-EX0631GEZZ or RH-EX0313CEZZ	J	Zener Diode, 9.1V	AA
D924	RH-EX0631GEZZ or RH-EX0313CEZZ	J	Zener Diode, 9.1V	AA

PACKAGED CIRCUITS

⚠ PR701	RMPTP0092CEZZ	J	Packaged Circuit (L702:G0038ME)	AH
X801	RCRSB0001PEZZ	R	Crystal	AL

FILTERS

CF301	RFiLC0029TAZZ	J	Ceramic Filter	AD
CF401	RFiLC0013CEZZ	J	Ceramic Filter	AE
CF631	RFiLA0034CEZZ	J	Ceramic Filter	AD
CF2040	RFiLC0121GEZZ	J	Ceramic Filter	AD
SF201	RFiLC0405CEZZ	J	SAW Filter	AH

COILS

DL421	RCiLZ0938CEZZ	J	Comb Filter	AW
L201	VP-XF1R2K0000	J	Peaking 1.2µH	AB
L202	RCiLi0588CEZZ or RCiLi0622CEZZ	J	IF Coil	AF
L301	VP-XF8R2K0000	J	Peaking 8.2µH	AB
L302	RCiLi0613CEZZ or RCiLi0605CEZZ	J	IF Coil	AE
L401	VP-XF6R8K0000	J	Peaking 6.8µH	AB
L402	VP-XF3R3K0000	J	Peaking 3.3µH	AB
L403	VP-XF8R2K0000	J	Peaking 8.2µH	AB
L404	VP-XF8R2K0000	J	Peaking 8.2µH	AB
L601	RCiLZ0102MEZZ or RCiLZ0101MEZZ	M	Coil	AE
⚠ L701	RCiLF0070PEZZ or RCiLF0025PEZZ or RCiLF0087PEZZ or RCiLF0235CEZZ	M	Coil	AD
⚠ L701	RCiLF0090CEZZ	J	Coil (CN27S30)	AL
L821	VP-XF680K0000	J	Peaking 68µH	AB
L2040	RCiLB0131CEZZ	J	Oscillation Coil	AE

PWB-A: DUNTKA120WEK0/1
MAIN UNIT (Continued)

TRANSFORMERS

Ref. No.	Part No.	★	Description	Code
⚠ T601	RTRNZ0168CEZZ	J	H-Driver	AH
▲⚠ T602	RTRNF0041MEZZ	M	H-Out	BA
⚠ T701	RTRNP0533CEZZ	M	Power Trans.	AK
⚠ T701	RTRNP0549CEZZ	M	Power Trans. (CN27S30)	AM

CAPACITORS

[EL.··· Electrolytic, M-Poly.··· Metalized Polypro Film]

Ref. No.	Part No.	★			Description	Code
C51	VCEA0A1CW476M	J	47	16V	EL.	AB
C53	VCEA0A1HW105M	J	1	50V	EL.	AB
C54	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C55	VCEA0A1CW108M	J	1000	16V	EL.	AD
C103	VCEA0A1CW228M	J	2200	16V	EL.	AD
C201	VCKYMN1HB102K	J	1000p	50V	Ceramic	AA
C202	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C203	VCKYCY1HB102K	J	1000p	50V	Ceramic	AA
C204	VCKYMN1CY103N	J	0.01	16V	Ceramic	AA
C205	VCEA0A1HW474M	J	0.47	50V	EL.	AB
C206	VCEA0A1CW337M	J	330	16V	EL.	AC
C207	VCKYMN1CY103N	J	0.01	16V	Ceramic	AA
C208	VCEA0A1HW474M	J	0.47	50V	EL.	AB
C209	VCKYCY1HB222K	J	2200p	50V	Ceramic	AA
C210	VCKYMN1HB102K	J	1000p	50V	Ceramic	AA
C301	VCCCCY1HH330J	J	33p	50V	Ceramic	AA
C302	VCCCCY1HH151J	J	150p	50V	Ceramic	AA
C303	VCCCCY1HH390J	J	39p	50V	Ceramic	AA
C307	VCCCCY1HH1R5C	J	1.5p	50V	Ceramic	AD
C308	VCKYCY1HB102K	J	1000p	50V	Ceramic	AA
C309	VCEA0A1CW337M	J	330	16V	EL.	AC
C351	VCKYCY1HB392K	J	3900p	50V	Ceramic	AA
C352	VCEA0A1CW107M	J	100	16V	EL.	AC
C353	VCEA0A1CW337M	J	330	16V	EL.	AC
C354	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C355	VCEA0A1CW226M	J	22	16V	EL.	AB
C356	VCKYCY1HB392K	J	3900p	50V	Ceramic	AA
C357	VCEA0A1CW107M	J	100	16V	EL.	AC
C358	VCEA0A1CW337M	J	330	16V	EL.	AC
C359	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C360	VCEA0A1CW226M	J	22	16V	EL.	AB
C361	VCEA0A1CW477M	J	470	16V	EL.	AC
C362	VCEA0A1CW476M	J	47	16V	EL.	AB
C401	VCKYMN1HB331K	J	330p	50V	Ceramic	AA
C402	VCKYMN1HB101K	J	100p	50V	Ceramic	AA
C403	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C404	VCEA0A1HW106M	J	10	50V	EL.	AB
C405	VCEA0A1HW335M	J	3.3	50V	EL.	AB
C406	VCEA0A1HW225M	J	2.2	50V	EL.	AB
C407	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C408	VCEA0A1HW106M	J	10	50V	EL.	AB
C409	VCEA0A1HW335M	J	3.3	50V	EL.	AB
C410	VCQYTA1HM104K	J	0.1	50V	Mylar	AC
C411	VCEA0A1CW337M	J	330	16V	EL.	AC
C412	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C413	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C422	VCEA0A1CW476M	J	47	16V	EL.	AB
C423	VCEA0A1CW476M	J	47	16V	EL.	AB
C451	VCQYTA1HM104K	J	0.1	50V	Mylar	AC
C452	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C453	VCEA0A2EW226M	J	22	250V	EL.	AE
C454	VCEA0A1VW226M	J	22	35V	EL.	AB
C471	VCKYPA1HB103K	J	0.01	50V	Ceramic	AA
C472	VCEA0A1HW106M	J	10	50V	EL.	AB
C473	VCEA0A1HW106M	J	10	50V	EL.	AB
C474	VCEA0A1HW106M	J	10	50V	EL.	AB
C475	VCEA0A1HW106M	J	10	50V	EL.	AB
C476	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C477	VCEA0A1HW106M	J	10	50V	EL.	AB
C478	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C502	VCEA0A1VW108M	J	1000	35V	EL.	AD
C504	VCKYPA2HB391K	J	390p	500V	Ceramic	AA
C505	VCQYTA1HM473K	J	0.047	50V	Mylar	AB
C507	VCQYTA1HM103K	J	0.01	50V	Mylar	AB
C508	VCEA0A1VW107M	J	100	35V	EL.	AC
C509	VCKYCY1HB182K	J	1800p	50V	Ceramic	AA
C510	VCEA0A1VW108M	J	1000	35V	EL.	AD
C511	VCFYSA1JB473J	M	0.047	63V	Mylar	AB
C512	VCFYSA1JB564J	M	0.56	63V	Mylar	AC
C513	VCEA0A1HW474M	J	0.47	50V	EL.	AB
C514	VCSATA1VE684K	J	0.68	35V	Tantalum(N.P)	AC
C551	VCSATA1CE225K	J	2.2	16V	Tantalum(N.P)	AB
C552	VCEA0A1HW225M	J	2.2	50V	EL.	AB
C603	VCQYTA1HM273K	J	0.027	50V	Mylar	AB
C604	VCEA0A1EW227M	J	220	25V	EL.	AB
▲⚠ C607	VCFPVC3CA662H	M	6600p	1600V	M-Poly.	AC
▲⚠ C608	VCFPVC3CA662H	M	6600p	1600V	M-Poly.	AC
C612	VCFPVC2DB474J	J	0.47	200V	M-Poly.	AE
C614	VCKYPA2HB331K	J	330p	500V	Ceramic	AA
C631	VCEA0A1HW335M	J	3.3	50V	EL.	AB
C632	VCQYTA1HM103K	J	0.01	50V	Mylar	AB
C633	VCEA0A1HW105M	J	1	50V	EL.	AB
C652	VCEA0A1HW106M	J	10	50V	EL.	AB
C653	VCEA0A1HW106M	J	10	50V	EL.	AB
⚠ C701	RC-FZ017SCEZZ or RC-FZ1011CEZZ or RC-FZ012SGEZZ	J	0.22	AC250V	Plastic	AD
C702	RC-KZ0029CEZZ	J	0.01	AC250V	Ceramic	AC
C703	RC-KZ0029CEZZ	J	0.01	AC250V	Ceramic	AC
C704	VCKYPA2HB472K	J	4700p	500V	Ceramic	AB
⚠ C705	RC-EZ0722CEZZ or RC-EZ0802CEZZ	M	820	200V	EL.	AL
⚠ C706	RC-KZ0092GEZZ or RC-KZ0031CEZZ	J	0.0033	AC250V	Ceramic	AC
C707	VCKYPA2HB272K	J	2700p	500V	Ceramic	AA
C708	VCKYPA2HB391K	J	390p	500V	Ceramic	AA
C709	RC-QZ0010CEZZ	J	0.01	250V	Ceramic	AC
C710	RC-QZ0010CEZZ	J	0.01	250V	Ceramic	AC
C711	VCKYPA2HB391K	J	390p	500V	Ceramic	AA
C712	VCKYPA2HB272K	J	2700p	500V	Ceramic	AA
⚠ C713	RC-EZ0696CEZZ	M	220	160V	EL.	AG
C714	VCQYTA1HM273K	J	0.027	50V	Mylar	AB
▲⚠ C715	VCQYTA1HM103K	J	0.01	50V	Mylar	AB
C717	VCEA0A1HW106M	J	10	50V	EL.	AB
C721	VCEA0A1EW477M	J	470	25V	EL.	AD
⚠ C722	VCKYPA2HB152K	J	1500p	500V	Ceramic	AA
C751	VCEA0A1EW476M	J	47	25V	EL.	AB
C753	VCEA0A1VW337M	J	330	35V	EL.	AD
C754	VCEA0A1CW107M	J	100	16V	EL.	AC
C756	VCEA0A1CW337M	J	330	16V	EL.	AC
C801	VCQYTA1HM223K	J	0.022	50V	Mylar	AB
C802	VCEA0A1HW474M	J	0.47	50V	EL.	AB
C803	VCCCCY1HH110J	J	11p	50V	Ceramic	AA
C804	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C805	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C806	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C807	VCCCCY1HH221J	J	220p	50V	Ceramic	AA
C821	VCKYCY1HB102K	J	1000p	50V	Ceramic	AA
C822	VCCCCY1HH150J	J	15p	50V	Ceramic	AA
C823	VCCCCY1HH150J	J	15p	50V	Ceramic	AA
C824	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C825	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C901	VCEA0A1HW335M	J	3.3	50V	EL.	AB
C902	VCEA0A1CW476M	J	47	16V	EL.	AB
C903	VCEA0A1HW335M	J	3.3	50V	EL.	AB
C908	VCEA0A1HW225M	J	2.2	50V	EL.	AB
C909	VCEA0A1HW225M	J	2.2	50V	EL.	AB
C910	VCKYCY1HB681K	J	680p	50V	Ceramic	AA
C911	VCKYCY1HB681K	J	680p	50V	Ceramic	AA
C922	VCEA0A1HW335M	J	3.3	50V	EL.	AB
C923	VCEA0A1HW335M	J	3.3	50V	EL.	AB
C925	VCEA0A1CW476M	J	47	16V	EL.	AB
C926	VCEA0A1CW476M	J	47	16V	EL.	AB
C927	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA

PWB-A: DUNTKA120WEK0/1
MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description			Code
C928	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C929	VCEA0A1HW106M	J	10	50V	EL.	AB
C930	VCEA0A1HW106M	J	10	50V	EL.	AB
C931	VCKYCY1EB183K	J	0.018	25V	Ceramic	AA
C932	VCKYCY1EB183K	J	0.018	25V	Ceramic	AA
C951	VCEA0A1HW106M	J	10	50V	EL.	AB
C952	VCEA0A1HW106M	J	10	50V	EL.	AB
C953	VCEA0A1HW106M	J	10	50V	EL.	AB
C954	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C955	VCEA0A1HW106M	J	10	50V	EL.	AB
C2001	VCCCCY1HH101J	J	100p	50V	Ceramic	AA
C2002	VCCCCY1HH101J	J	100p	50V	Ceramic	AA
C2040	VCEA0A1AW107M	J	100	10V	EL.	AB
C2041	VCEA0A1HW105M	J	1	50V	EL.	AB
C2060	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C2061	VCKYMN1HB101K	J	100p	50V	Ceramic	AA
C2062	VCEA0A1AW107M	J	100	10V	EL.	AB
C2201	VCKYCY1HB152K	J	1500p	50V	Ceramic	AA
C2211	VCCCCY1HH390J	J	39p	50V	Ceramic	AA
C2601	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C2602	VCKYMN1HB101K	J	100p	50V	Ceramic	AA
C3001	VCE9GA1HW475M	J	4.7	50V	EL.(N.P)	AB
C3002	VCKYCY1HB562K	J	5600p	50V	Ceramic	AA
C3003	VCQYTA1HM123K	J	0.012	50V	Mylar	AA
C3004	VCEA0A1HW105M	J	1	50V	EL.	AB
C3005	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C3006	VCEA0A1HW106M	J	10	50V	EL.	AB
C3007	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C3008	VCKYMN1CY103N	J	0.01	16V	Ceramic	AA
C3009	VCEA0A1CW227M	J	220	16V	EL.	AC
C3010	VCE9GA1HW475M	J	4.7	50V	EL.(N.P)	AB
C3011	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C3012	VCE9GA1HW475M	J	4.7	50V	EL.(N.P)	AB
C3013	VCKYCY1HB272K	J	2700p	50V	Ceramic	AA
C3014	VCQYTA1HM473K	J	0.047	50V	Mylar	AB
C3015	VCSATA1CE335K	J	3.3	16V	Tantalum(N.P)	AC
C3016	VCE9GA1HW475M	J	4.7	50V	EL.(N.P)	AB
C3017	VCSATA1CE106K	J	10	16V	Tantalum(N.P)	AD
C3018	VCEA0A1HW105M	J	1	50V	EL.	AB
C3019	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C3020	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C3021	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C3022	VCEA0A1HW475M	J	4.7	50V	EL.	AB

RESISTORS

[M-Ox.··· Metal Oxide, M-Film··· Metal Film]

RJ1	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ2	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ3	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ4	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ6	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ9	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ12	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ13	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ14	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ15	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ16	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ17	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ18	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ19	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ20	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ21	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ26	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ27	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ28	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ30	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ31	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ32	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ35	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ38	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ39	VRD-MN2BE000J	J	0	1/8W	Carbon	AA

Ref. No.	Part No.	★	Description			Code
RJ43	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ45	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ47	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ48	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ49	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ50	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ52	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ53	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ54	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ58	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ59	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ60	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ62	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ63	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ65	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ66	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ68	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ69	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ73	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ75	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ76	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ77	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ80	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ81	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ82	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ83	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ84	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ86	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ87	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ91	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ92	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ93	VRS-CY1JF1R0J	J	1	1/16W	M-Ox.	AA
RJ94	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ95	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ96	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ97	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ98	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ102	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ104	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ105	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ106	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ108	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
RJ109	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ110	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
⚠ R51	VRS-RG3AB391J	M	390	1W	M-Ox.	AA
⚠ R52	VRS-RG3AB470J	J	47	1W	M-Ox.	AA
⚠ R53	VRS-RG3LB333J	J	33k	3W	M-Ox.	AC
R54	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R55	VRD-MN2BE101J	J	100	1/8W	Carbon	AA
R56	VRD-MN2BE823J	J	82k	1/8W	Carbon	AA
R57	VRD-MN2BE392J	J	3.9k	1/8W	Carbon	AA
R201	VRD-MN2BE151J	J	150	1/8W	Carbon	AA
R202	VRD-MN2BE122J	J	1.2k	1/8W	Carbon	AA
R203	VRD-MN2BE682J	J	6.8k	1/8W	Carbon	AA
R204	VRD-MN2BE270J	J	27	1/8W	Carbon	AA
R205	VRS-CY1JF331J	J	330	1/16W	M-Ox.	AA
R206	VRD-RA2BE121J	J	120	1/8W	Carbon	AA
R208	VRD-MN2BE331J	J	330	1/8W	Carbon	AA
R301	VRD-RA2BE222J	J	2.2k	1/8W	Carbon	AA
R302	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R303	VRD-MN2BE103J	J	10k	1/8W	Carbon	AA
R304	VRD-MN2BE333J	J	33k	1/8W	Carbon	AA
R305	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R306	VRS-CY1JF152J	J	1.5k	1/16W	M-Ox.	AA
R351	VRS-CY1JF333J	J	33k	1/16W	M-Ox.	AA
R352	VRD-MN2BE472J	J	4.7k	1/8W	Carbon	AA
R353	VRD-MN2BE4R7J	J	4.7	1/8W	Carbon	AA
R354	VRS-CY1JF152J	J	1.5k	1/16W	M-Ox.	AA
R356	VRS-CY1JF472J	J	4.7k	1/16W	M-Ox.	AA
R357	VRD-MN2BE4R7J	J	4.7	1/8W	Carbon	AA
R358	VRS-CY1JF152J	J	1.5k	1/16W	M-Ox.	AA
R359	VRS-CY1JF333J	J	33k	1/16W	M-Ox.	AA
R401	VRD-MN2BE682J	J	6.8k	1/8W	Carbon	AA
R402	VRS-CY1JF331J	J	330	1/16W	M-Ox.	AA
R403	VRS-CY1JF391J	J	390	1/16W	M-Ox.	AA
R404	VRD-MN2BE102J	J	1k	1/8W	Carbon	AA

PWB-A: DUNTKA120WEK0/1
MAIN UNIT (Continued)

Ref. No.	Part No.	★				Code
R405	VRS-CY1JF470J	J	47	1/16W	M-Ox.	AA
R406	VRS-CY1JF680J	J	68	1/16W	M-Ox.	AA
R407	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R408	VRS-CY1JF471J	J	470	1/16W	M-Ox.	AA
R409	VRD-MN2BE562J	J	5.6k	1/8W	Carbon	AA
R410	VRD-RA2BE823J	J	82k	1/8W	Carbon	AA
R411	VRD-MN2BE332J	J	3.3k	1/8W	Carbon	AA
R412	VRD-RA2BE561J	J	560	1/8W	Carbon	AA
R413	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R414	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R415	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R420	VRS-CY1JF332J	J	3.3k	1/16W	M-Ox.	AA
R421	VRS-CY1JF152J	J	1.5k	1/16W	M-Ox.	AA
R423	VRS-CY1JF152J	J	1.5k	1/16W	M-Ox.	AA
R424	VRD-MN2BE102J	J	1k	1/8W	Carbon	AA
⚠ R451	VRS-RG2HC103J	J	10k	1/2W	M-Ox.	AA
R452	VRD-MN2BE103J	J	10k	1/8W	Carbon	AA
R453	VRD-RA2EE393J	J	39k	1/4W	Carbon	AA
R454	VRD-RM2HD104J	J	100k	1/2W	Carbon	AA
R455	VRD-RA2BE152J	J	1.5k	1/8W	Carbon	AA
R456	VRS-CY1JF682J	J	6.8k	1/16W	M-Ox.	AA
R457	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R458	VRS-RG3DB332J	M	3.3k	2W	M-Ox.	AA
R459	VRD-MN2BE102J	J	1k	1/8W	Carbon	AA
⚠ R466	VRN-RL3DB5R6J	M	5.6	2W	M-Film	AA
⚠ R467	VRN-RL3ABR22J	M	0.22	1W	M-Film	AA
⚠ R468	VRN-RL3DB5R6J	M	5.6	2W	M-Film	AA
R473	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R481	VRD-MN2BE682J	J	6.8k	1/8W	Carbon	AA
R482	VRD-MN2BE223J	J	22k	1/8W	Carbon	AA
R483	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R501	VRD-RA2BE124G	J	120k	1/8W	Carbon	AA
R502	VRD-RA2BE823G	J	82k	1/8W	Carbon	AB
R503	VRD-RA2BE473J	J	47k	1/8W	Carbon	AA
R504	VRD-MN2BE471J	J	470	1/8W	Carbon	AA
R505	VRD-MN2BE101J	J	100	1/8W	Carbon	AA
R506	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R510	VRN-RL3AB1R0J	M	1	1W	M-Film	AA
⚠ R511	VRN-RL3ABR56J	J	0.56	1W	M-Film	AA
R512	VRS-RG3AB391J	M	390	1W	M-Ox.	AA
R516	VRD-MN2BE562J	J	5.6k	1/8W	Carbon	AA
R518	VRD-MN2BE184J	J	180k	1/8W	Carbon	AA
R521	VRD-RA2BE153G	J	15k	1/8W	Carbon	AA
R551	VRS-CY1JF472J	J	4.7k	1/16W	M-Ox.	AA
R552	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R553	VRD-MN2BE333J	J	33k	1/8W	Carbon	AA
R554	VRD-MN2BE333J	J	33k	1/8W	Carbon	AA
R601	VRD-MN2BE331J	J	330	1/8W	Carbon	AA
R602	VRD-RM2HD560J	J	56	1/2W	Carbon	AA
⚠ R603	VRS-RG3LB120J	M	12	3W	M-Ox.	AB
⚠ R604	VRN-RL3LBR56J	M	0.56	3W	M-Film	AB
R605	VRS-RG2HC102J	J	1k	1/2W	M-Ox.	AA
R606	VRD-MN2BE102J	J	1k	1/8W	Carbon	AA
R608	VRD-MN2BE101J	J	100	1/8W	Carbon	AA
⚠ R609	VRS-RG3LB120J	M	12	3W	M-Ox.	AB
⚠ R610	VRN-RL3LBR56J	M	0.56	3W	M-Film	AB
R611	VRD-MN2BE332J	J	3.3k	1/8W	Carbon	AA
R631	VRS-CY1JF391J	J	390	1/16W	M-Ox.	AA
R632	VRD-MN2BE152J	J	1.5k	1/8W	Carbon	AA
R633	VRS-CY1JF472J	J	4.7k	1/16W	M-Ox.	AA
R634	VRD-RM2HD101J	J	100	1/2W	Carbon	AA
▲⚠ R651	VRS-RG2HC270J	M	27	1/2W	M-Ox.	AA
▲⚠ R652	VRD-MN2BE221J	J	220	1/8W	Carbon	AA
▲⚠ R653	VRN-RA2BK822F	J	8.2k	1/8W	M-Film	AA
▲⚠ R654	VRN-RA2BK682F	J	6.8k	1/8W	M-Film	AA
▲⚠ R655	VRS-CY1JF104J	J	100k	1/16W	M-Ox.	AA
⚠ R701	RR-HZ0046CEZZ	J	2.7	1/2W	Solid	AD
⚠ R702	VRW-KQ3NC1R2K	J	1.2	7W	Cement	AE
R704	VRD-RM2HD223J	J	22k	1/2W	Carbon	AA
R705	VRD-RM2HD223J	J	22k	1/2W	Carbon	AA
⚠ R706	VRS-RG2HC151J	J	150	1/2W	M-Ox.	AA
⚠ R707	VRS-KA3NG331K	M	330	7W	M-Ox.	AC
⚠ R708	VRD-RM2HD330J	J	33	1/2W	Carbon	AA
⚠ R709	VRS-KA3NG331K	M	330	7W	M-Ox.	AC
⚠ R710	VRD-RM2HD330J	J	33	1/2W	Carbon	AA
⚠ R711	VRN-GA2EB1R0J	J	1	1/4W	M-Film	AA
R712	VRD-RA2BE822J	J	8.2k	1/8W	Carbon	AA
R713	VRD-RM2HD681J	J	680	1/2W	Carbon	AA
⚠ R714	VRS-KA3NG3R3K	J	3.3	7W	M-Ox.	AD
⚠ R715	VRW-KQ4AC2R7K	J	2.7	10W	Cement	AE
R716	VRD-RM2HD223J	J	22k	1/2W	Carbon	AA
R717	VRN-GA2EB1R0J	J	1	1/4W	M-Film	AA
R718	VRN-RL3AB2R7J	M	2.7	1W	M-Film	AA
⚠ R719	VRN-RL3LBR56J	M	0.56	3W	M-Film	AB
R751	VRD-RM2HD471J	J	470	1/2W	Carbon	AA
R752	VRD-MN2BE392J	J	3.9k	1/8W	Carbon	AA
R754	VRD-MN2BE223J	J	22k	1/8W	Carbon	AA
⚠ R755	VRS-RG3LB180J	J	18	3W	M-Ox.	AD
R757	VRD-MN2BE472J	J	4.7k	1/8W	Carbon	AA
⚠ R760	VRS-RG3AB150J	M	15	1W	M-Ox.	AA
⚠ R761	VRN-RL3AB4R7J	J	4.7	1W	M-Film	AB
R801	VRD-MN2BE332J	J	3.3k	1/8W	Carbon	AA
R802	VRD-MN2BE332J	J	3.3k	1/8W	Carbon	AA
R803	VRS-CY1JF222J	J	2.2k	1/16W	M-Ox.	AA
R804	VRS-CY1JF222J	J	2.2k	1/16W	M-Ox.	AA
R805	VRS-CY1JF222J	J	2.2k	1/16W	M-Ox.	AA
R806	VRD-MN2BE333J	J	33k	1/8W	Carbon	AA
R821	VRS-CY1JF682J	J	6.8k	1/16W	M-Ox.	AA
R822	VRS-CY1JF183J	J	18k	1/16W	M-Ox.	AA
R823	VRS-CY1JF471J	J	470	1/16W	M-Ox.	AA
R824	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R825	VRS-CY1JF152J	J	1.5k	1/16W	M-Ox.	AA
R826	VRS-CY1JF562J	J	5.6k	1/16W	M-Ox.	AA
R827	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R828	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R829	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R901	VRD-RA2BE331J	J	330	1/8W	Carbon	AA
R903	VRD-MN2BE102J	J	1k	1/8W	Carbon	AA
R904	VRS-CY1JF683J	J	68k	1/16W	M-Ox.	AA
R905	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R906	VRS-CY1JF392J	J	3.9k	1/16W	M-Ox.	AA
R907	VRS-CY1JF182J	J	1.8k	1/16W	M-Ox.	AA
R908	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R910	VRD-MN2BE102J	J	1k	1/8W	Carbon	AA
R911	VRS-CY1JF683J	J	68k	1/16W	M-Ox.	AA
R912	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R913	VRS-CY1JF392J	J	3.9k	1/16W	M-Ox.	AA
R914	VRS-CY1JF182J	J	1.8k	1/16W	M-Ox.	AA
R915	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R920	VRD-MN2BE101J	J	100	1/8W	Carbon	AA
R922	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R923	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R925	VRD-MN2BE104J	J	100k	1/8W	Carbon	AA
R926	VRD-MN2BE104J	J	100k	1/8W	Carbon	AA
R927	VRD-RA2BE750J	J	75	1/8W	Carbon	AA
R930	VRS-CY1JF563J	J	56k	1/16W	M-Ox.	AA
R931	VRD-MN2BE333J	J	33k	1/8W	Carbon	AA
R932	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R933	VRS-CY1JF122J	J	1.2k	1/16W	M-Ox.	AA
R934	VRS-CY1JF473J	J	47k	1/16W	M-Ox.	AA
R935	VRS-CY1JF750J	J	75	1/16W	M-Ox.	AA
R936	VRD-MN2BE473J	J	47k	1/8W	Carbon	AA
R937	VRD-MN2BE102J	J	1k	1/8W	Carbon	AA
R938	VRS-CY1JF122J	J	1.2k	1/16W	M-Ox.	AA
R939	VRD-MN2BE122J	J	1.2k	1/8W	Carbon	AA
R940	VRD-MN2BE122J	J	1.2k	1/8W	Carbon	AA
R941	VRD-MN2BE183J	J	18k	1/8W	Carbon	AA
R942	VRD-MN2BE273J	J	27k	1/8W	Carbon	AA
R943	VRD-MN2BE102J	J	1k	1/8W	Carbon	AA
R951	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R952	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R953	VRD-MN2BE750J	J	75	1/8W	Carbon	AA
R954	VRD-MN2BE750J	J	75	1/8W	Carbon	AA
R961	VRD-RA2BE101J	J	100	1/8W	Carbon	AB
R962	VRD-RA2BE101J	J	100	1/8W	Carbon	AB
R2001	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R2002	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R2004	VRD-MN2BE473J	J	47k	1/8W	Carbon	AA

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MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description			Code
R2006	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R2008	VRD-MN2BE102J	J	1k	1/8W	Carbon	AA
R2009	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R2010	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R2011	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R2012	VRS-CY1JF471J	J	470	1/16W	M-Ox.	AA
R2020	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R2024	VRD-RA2BE682J	J	6.8k	1/8W	Carbon	AA
R2025	VRD-RA2BE682J	J	6.8k	1/8W	Carbon	AA
R2026	VRD-MN2BE682J	J	6.8k	1/8W	Carbon	AA
R2027	VRD-MN2BE682J	J	6.8k	1/8W	Carbon	AA
R2028	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R2029	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R2032	VRD-RA2BE103J	J	10k	1/8W	Carbon	AA
R2035	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R2036	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R2040	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R2041	VRS-CY1JF333J	J	33k	1/16W	M-Ox.	AA
R2042	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R2043	VRD-MN2BE333J	J	33k	1/8W	Carbon	AA
R2044	VRS-CY1JF682J	J	6.8k	1/16W	M-Ox.	AA
R2045	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R2046	VRD-RA2BE101J	J	100	1/8W	Carbon	AB
R2047	VRD-MN2BE101J	J	100	1/8W	Carbon	AA
R2048	VRS-CY1JF562J	J	5.6k	1/16W	M-Ox.	AA
R2060	VRD-MN2BE101J	J	100	1/8W	Carbon	AA
R2061	VRS-CY1JF562J	J	5.6k	1/16W	M-Ox.	AA
R2062	VRD-MN2BE183J	J	18k	1/8W	Carbon	AA
R2063	VRD-MN2BE222J	J	2.2k	1/8W	Carbon	AA
R2064	VRD-RA2BE332J	J	3.3k	1/8W	Carbon	AA
R2065	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R2067	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R2069	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R2071	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R2072	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R2073	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R2101	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R2102	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R2201	VRD-MN2BE222J	J	2.2k	1/8W	Carbon	AA
R2202	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R2203	VRS-CY1JF184J	J	180k	1/16W	M-Ox.	AA
R2211	VRD-MN2BE222J	J	2.2k	1/8W	Carbon	AA
R2212	VRS-CY1JF682J	J	6.8k	1/16W	M-Ox.	AA
R2213	VRS-CY1JF333J	J	33k	1/16W	M-Ox.	AA
R2401	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R2402	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R2403	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R2404	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R2501	VRD-MN2BE103J	J	10k	1/8W	Carbon	AA
R2503	VRD-MN2BE273J	J	27k	1/8W	Carbon	AA
R2504	VRD-MN2BE123J	J	12k	1/8W	Carbon	AA
R2505	VRD-MN2BE563J	J	56k	1/8W	Carbon	AA
R2506	VRD-MN2BE563J	J	56k	1/8W	Carbon	AA
R2507	VRD-MN2BE823J	J	82k	1/8W	Carbon	AA
R2508	VRD-MN2BE153J	J	15k	1/8W	Carbon	AA
R2509	VRD-MN2BE272J	J	2.7k	1/8W	Carbon	AA
R2601	VRD-RA2BE331J	J	330	1/8W	Carbon	AA
R3001	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
R3002	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
R3003	VRS-CY1JF105J	J	1M	1/16W	M-Ox.	AA
R3004	VRS-CY1JF104J	J	100k	1/16W	M-Ox.	AA
R3005	VRS-CY1JF623J	J	62k	1/16W	M-Ox.	AA
R3007	VRS-CY1JF332J	J	3.3k	1/16W	M-Ox.	AA
R3008	VRS-CY1JF302J	J	3k	1/16W	M-Ox.	AA
R3010	VRD-MN2BE392J	J	3.9k	1/8W	Carbon	AA
R3011	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R3012	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R3013	VRD-MN2BE104J	J	100k	1/8W	Carbon	AA
R3014	VRD-MN2BE104J	J	100k	1/8W	Carbon	AA
R3017	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R3018	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA

Ref. No.	Part No.	★	Description	Code
			SWITCHES	
S2501	QSW-K0202PEZZ	R	Power	AC
S2502	QSW-K0202PEZZ	R	Vol-down	AC
S2503	QSW-K0202PEZZ	R	Vol-up	AC
S2504	QSW-K0202PEZZ	R	CH-down	AC
S2505	QSW-K0202PEZZ	R	CH-up	AC
			MISCELLANEOUS PARTS	
FB601	RBLN-0037CEZZ	J	Ferrite Bead	AB
FB701	RBLN-0037CEZZ	J	Ferrite Bead	AB
FB702	RBLN-0037CEZZ	J	Ferrite Bead	AB
FH701	QFSHD1013CEZZ	J	Fuse Holder	AC
FH702	QFSHD1014CEZZ	J	Fuse Holder	AC
⚠ F701	QFS-B4023CEZZ	J	Fuse 4A(125V)	AC
	or			
	QFS-B4021GEZZ			
J921	QSOCD0430CEZZ	J	Socket, S-Video	AE
JA216	RBLN-0037CEZZ	J	Ferrite Bead	AB
P602	QPLGN0160FJZZ	J	Plug 5-pin (K)	AD
P651	QPLGN0361CEZZ	J	Plug 3-pin	AB
P701	QPLGN0207CEZZ	J	Plug 2-pin (M)	AA
P702	QPLGN0461CEZZ	J	Plug 4-pin (YBN)	AB
P703	QPLGN0269GEZZ	J	Plug 2-pin (P)	AB
P901	QPLGN0561CEZZ	J	Plug 5-pin (HA)	AB
P902	QPLGN0461CEZZ	J	Plug 4-pin (S)	AB
P903	QPLGN0561CEZZ	J	Plug 5-pin (GBN)	AB
P2401	QPLGN0561CEZZ	J	Plug 5-pin	AB
RDA501	PRDAR0234PEFW	R	Heat Sink, for IC501	AH
RDA604	PRDAR0233PEFW	R	Heat Sink, for Q602	AK
RDA707	PRDAR0026PEFW	R	Heat Sink, for D707	AD
RDA708	PRDAR0026PEFW	R	Heat Sink, for D708	AD
RDA751	PRDAR5072CEFW	J	Heat Sink, for Q751	AC
RDA752	PRDAR5072CEFW	J	Heat Sink, for IC751	AC
RMC2601	RRMCU0227CEZZ	J	Remote Receiver	AK
	or			
	RRMCU0224CEZZ			
	or			
	RRMCU0216CEZZ			
	or			
	RRMCU0232CEZZ			
⚠ RY701	RRLYU0036CEZZ	J	Relay	AM
	or			
	RRLYU0038CEZZ			
TAN921	QTANJ0523CEZZ	M	AV Terminal	AG
	LX-BZ3049GEFD	J	Screw	AA

PWB-B: DUNTK9510WEK0
CRT UNIT

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q851	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q852	VS2SC3789//2E	J	2SC3789	AF
	or			
	VS2SC3619LB-1			
Q853	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q854	VS2SC3789//2E	J	2SC3789	AF
	or			
	VS2SC3619LB-1			
Q855	VS2SC3198-Y-1	J	2SC3198(Y)	AA
Q856	VS2SC3789//2E	J	2SC3789	AF
	or			
	VS2SC3619LB-1			
Q881	VS2SA1266-Y-1	J	2SA1266(Y)	AA

DIODES

You can substitute “RH-DX0475CEZZ” for “VHD1SS119//-1”.

Ref. No.	Part No.	★	Description	Code
D881	VHD1SS119//-1	J	1SS119	AB
D882	VHD1SS119//-1	J	1SS119	AB
D884	VHD1SS119//-1	J	1SS119	AB

COIL

Ref. No.	Part No.	★	Description	Code
L851	VP-MK820K0000	J	Peaking 82µH	AB

CAPACITORS

[EL.··· Electrolytic]

Ref. No.	Part No.	★				Code
C851	VCCSPA1HL391J	J	390p	50V	Ceramic	AA
C852	VCCSPA1HL331J	J	330p	50V	Ceramic	AA
C853	VCCSPA1HL391J	J	390p	50V	Ceramic	AA
C854	RC-KZ0024CEZZ	J	0.001	2kV	Ceramic	AC
	or					
	VCKYPB3DE472Z		0.0047	2kV	Ceramic	
C883	VCEA0A1HW106M	J	10	50V	EL.	AB

RESISTORS

[M-Ox.··· Metal Oxide]

Ref. No.	Part No.	★				Code
R851	VRD-RA2BE470J	J	47	1/8W	Carbon	AA
R852	VRD-RA2BE181J	J	180	1/8W	Carbon	AA
R853	VRD-RA2BE121J	J	120	1/8W	Carbon	AA
R855	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R856	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
⚠ R857	VRS-VV3LB123J	J	12k	3W	M-Ox.	AB
R858	VRD-RM2HD222J	J	2.2k	1/2W	Carbon	AA
R859	VRD-RA2BE470J	J	47	1/8W	Carbon	AA
R860	VRD-RA2BE181J	J	180	1/8W	Carbon	AA
R861	VRD-RA2BE121J	J	120	1/8W	Carbon	AA
R863	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R864	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
⚠ R865	VRS-VV3LB123J	J	12k	3W	M-Ox.	AB
R866	VRD-RM2HD222J	J	2.2k	1/2W	Carbon	AA
R867	VRD-RA2BE470J	J	47	1/8W	Carbon	AA
R868	VRD-RA2BE181J	J	180	1/8W	Carbon	AA
R869	VRD-RA2BE121J	J	120	1/8W	Carbon	AA
R871	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R872	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
⚠ R873	VRS-VV3LB123J	J	12k	3W	M-Ox.	AB
R874	VRD-RM2HD222J	J	2.2k	1/2W	Carbon	AA
R881	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R882	VRD-RA2BE271J	J	270	1/8W	Carbon	AA
R883	VRD-RA2BE561J	J	560	1/8W	Carbon	AA
R884	VRD-RA2BE152J	J	1.5k	1/8W	Carbon	AA
R895	VRD-RA2BE470J	J	47	1/8W	Carbon	AA

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
P851	QPLGN0541CEZZ	J	Plug 5-pin (GBN)	AB
P852	QPLGN0441CEZZ	J	Plug 4-pin (YBN)	AB
SC851	QSOCV0937CEZZ	J	CRT Socket	AL

PWB-C: DUNTK9310WEK1
FRONT AV UNIT

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
J1001	QJAKE0053GEZZ	J	Jack, Video in	AD
J1002	QJAKE0055GEZZ	J	Jack, Audio in (L)	AD
J1003	QJAKE0059GEZZ	J	Jack, Audio in (R)	AC
P1001	QPLGN0541CEZZ	J	Plug 5-pin (HA)	AB

PWB-R: DUNTK9511WEK3
P-IN-P UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC1701	VHiMM1117XF1E	M	MM1117XFBE	AD
IC1781	VHiKA7805Pi-1	R	KA7805PI	AE
IC1801	VHiM65667FP-2	J	M65667FP	BC

TRANSISTORS

You can substitute “VS2SC2462-C-1” or “VS2SC2412-C-1” for “VS2SD601AR/-1”.

Ref. No.	Part No.	★	Description	Code
Q1721	VS2SD601AR/-1	J	2SD601AR	AC
Q1741	VS2SB709AR/-1	J	2SB709AR	AC
	or			
	VS2SA1037KR-1			
Q1742	VS2SB709AR/-1	J	2SB709AR	AC
	or			
	VS2SA1037KR-1			
Q1761	VS2SB709AR/-1	J	2SB709AR	AC
	or			
	VS2SA1037KR-1			
Q1762	VS2SB709AR/-1	J	2SB709AR	AC
	or			
	VS2SA1037KR-1			
Q1791	VS2SC1959Y/1E	J	2SC1959Y	AC
Q1861	VS2SB709AR/-1	J	2SB709AR	AC
	or			
	VS2SA1037KR-1			
Q1881	VS2SD601AR/-1	J	2SD601AR	AC
Q1882	VS2SD601AR/-1	J	2SD601AR	AC
Q1883	VS2SD601AR/-1	J	2SD601AR	AC

DIODES

You can subsitute “RH-DX0475CEZZ” for “VHD1SS119//-1”.

Ref. No.	Part No.	★	Description	Code
D1791	RH-EX0604GEZZ	J	Zener Diode, 4.3V	AB
D1801	VHD1SS119//-1	J	1SS119	AB
D1821	VHD1SS119//-1	J	1SS119	AB

PACKAGED CIRCUIT

Ref. No.	Part No.	★	Description	Code
X1861	RCRSB0283CEZZ	J	Crystal	AG
	or			
	RCRSB0241CEZZ			

COILS

Ref. No.	Part No.	★	Description	Code
L1721	VP-XF680K0000	J	Peaking 68µH	AB
L1801	VP-XF100K0000	J	Peaking 10µH	AB
L1821	VP-XF100K0000	J	Peaking 10µH	AB
L1861	VP-XF100K0000	J	Peaking 10µH	AB
L1862	VP-XF100K0000	J	Peaking 10µH	AB
L1863	VP-XF100K0000	J	Peaking 10µH	AB

CAPACITORS

[EL.··· Electrolytic]

Ref. No.	Part No.	★				Code
C1701	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C1702	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C1703	VCEA0A1HW475M	J	4.7	50V	EL.	AB

PWB-R: DUNTK9511WEK3

P-IN-P UNIT (Continued)

Ref. No.	Part No.	★	Description			Code
C1721	VCEA0A1HW106M	J	10	50V	EL.	AB
C1722	VCCCCY1HH330J	J	33p	50V	Ceramic	AA
C1741	VCQYTA1HM473J	J	0.047	50V	Mylar	AA
C1742	VCEA0A1HW105M	J	1	50V	EL.	AB
C1743	VCQYTA1HM472J	J	4700p	50V	Mylar	AB
C1761	VCQYTA1HM473J	J	0.047	50V	Mylar	AA
C1762	VCEA0A1HW105M	J	1	50V	EL.	AB
C1763	VCQYTA1HM682J	J	6800p	50V	Mylar	AB
C1781	VCEA0A1CW476M	J	47	16V	EL.	AB
C1791	VCEA0A1AW107M	J	100	10V	EL.	AB
C1792	VCEA0A1AW107M	J	100	10V	EL.	AB
C1801	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C1802	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C1803	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C1804	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C1805	VCEA0A1HW106M	J	10	50V	EL.	AB
C1806	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C1807	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C1809	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C1810	VCEA0A1CW226M	J	22	16V	EL.	AB
C1811	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C1812	VCEA0A1HW106M	J	10	50V	EL.	AB
C1821	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C1822	VCEA0A1HW106M	J	10	50V	EL.	AB
C1841	VCEA0A1HW106M	J	10	50V	EL.	AB
C1842	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C1843	VCCCCY1HH680J	J	68p	50V	Ceramic	AA
C1845	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C1846	VCCCCY1HH151J	J	150p	50V	Ceramic	AA
C1847	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C1848	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C1849	VCEA0A1HW106M	J	10	50V	EL.	AB
C1850	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C1851	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C1861	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C1862	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C1863	VCCCCY1HH101J	J	100p	50V	Ceramic	AA
C1865	VCFYFA1HA154J	J	0.15	50V	Mylar	AC
C1866	VCQYTA1HM103J	J	0.01	50V	Mylar	AA
C1867	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C1868	VCFYFA1HA474J	J	0.47	50V	Mylar	AC
C1869	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C1870	VCEA0A1HW106M	J	10	50V	EL.	AB
C1871	VCEA0A1HW106M	J	10	50V	EL.	AB
C1872	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA

RESISTORS

[M-Ox.··· Metal Oxide]

RJ1	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ2	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
	or					
	VRS-CY1JF000J					
RJ3	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ4	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ5	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ6	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ7	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ8	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ9	VRD-MN2BE000J	J	0	1/8W	Carbon	AA
	or					
	VRS-CY1JF000J					
RJ10	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ11	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R1701	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R1702	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R1703	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R1704	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R1705	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R1706	VRS-CY1JF474J	J	470k	1/16W	M-Ox.	AA
R1721	VRS-CY1JF332J	J	3.3k	1/16W	M-Ox.	AA
R1722	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R1723	VRS-CY1JF822J	J	8.2k	1/16W	M-Ox.	AA
R1724	VRS-CY1JF222J	J	2.2k	1/16W	M-Ox.	AA
R1741	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R1742	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R1743	VRS-CY1JF151J	J	150	1/16W	M-Ox.	AA
R1744	VRS-CY1JF122J	J	1.2k	1/16W	M-Ox.	AA
R1745	VRS-CY1JF474J	J	470k	1/16W	M-Ox.	AA
R1746	VRS-CY1JF122J	J	1.2k	1/16W	M-Ox.	AA
R1747	VRD-RA2BE822J	J	8.2k	1/8W	Carbon	AA
R1761	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R1762	VRS-CY1JF151J	J	150	1/16W	M-Ox.	AA
R1763	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R1764	VRS-CY1JF122J	J	1.2k	1/16W	M-Ox.	AA
R1765	VRS-CY1JF474J	J	470k	1/16W	M-Ox.	AA
R1766	VRS-CY1JF122J	J	1.2k	1/16W	M-Ox.	AA
R1791	VRD-RA2BE151J	J	150	1/8W	Carbon	AA
R1801	VRS-CY1JF473J	J	47k	1/16W	M-Ox.	AA
R1821	VRS-CY1JF123J	J	12k	1/16W	M-Ox.	AA
R1822	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R1823	VRS-CY1JF183J	J	18k	1/16W	M-Ox.	AA
R1825	VRS-CY1JF183J	J	18k	1/16W	M-Ox.	AA
R1828	VRS-CY1JF153J	J	15k	1/16W	M-Ox.	AA
R1831	VRS-CY1JF332J	J	3.3k	1/16W	M-Ox.	AA
R1832	VRS-CY1JF682J	J	6.8k	1/16W	M-Ox.	AA
R1833	VRS-CY1JF272J	J	2.7k	1/16W	M-Ox.	AA
R1834	VRS-CY1JF222J	J	2.2k	1/16W	M-Ox.	AA
R1841	VRS-CY1JF153J	J	15k	1/16W	M-Ox.	AA
R1842	VRS-CY1JF471J	J	470	1/16W	M-Ox.	AA
R1843	VRS-CY1JF391J	J	390	1/16W	M-Ox.	AA
R1861	VRS-CY1JF153J	J	15k	1/16W	M-Ox.	AA
R1862	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R1863	VRS-CY1JF102J	J	1k	1/16W	M-Ox.	AA
R1864	VRS-CY1JF221J	J	220	1/16W	M-Ox.	AA
R1865	VRS-CY1JF474J	J	470k	1/16W	M-Ox.	AA
R1866	VRS-CY1JF104J	J	100k	1/16W	M-Ox.	AA
R1867	VRS-CY1JF202J	J	2k	1/16W	M-Ox.	AA
R1868	VRS-CY1JF510J	J	51	1/16W	M-Ox.	AA
R1881	VRS-CY1JF473J	J	47k	1/16W	M-Ox.	AA
R1882	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R1883	VRS-CY1JF123J	J	12k	1/16W	M-Ox.	AA
R1884	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R1885	VRS-CY1JF473J	J	47k	1/16W	M-Ox.	AA
R1886	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R1887	VRS-CY1JF123J	J	12k	1/16W	M-Ox.	AA
R1889	VRD-RA2BE101J	J	100	1/8W	Carbon	AB

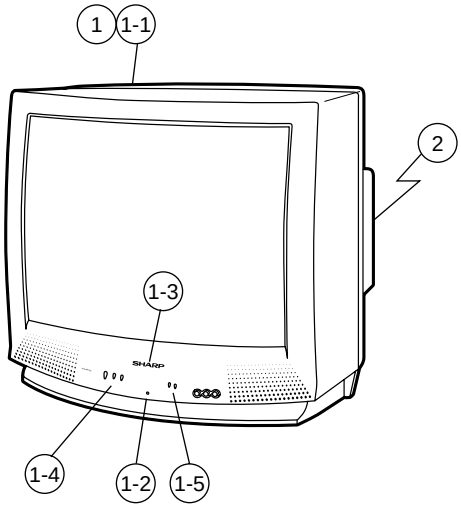
MISCELLANEOUS PARTS

P1701	QPLGZ0810CEZZ	J	Plug 8-pin	AD
P1702	QPLGZ0610CEZZ	J	Plug 6-pin	AB
P1703	QPLGZ0810CEZZ	J	Plug 8-pin	AD
SLD1801	PSLDM0012MEFW	J	Shield	AD

CABINET PARTS

Ref. No.	Part No.	★	Description	Code
1	CCABA1327MES0	M	Front Cabinet Ass'y	BF
1-1	*Not Available*	–	Front Cabinet	—
1-2	GCOVA1033MEKA	M	Cover for R/C	AD
1-3	HBDGB1009MESA	M	Badge, "SHARP"	AD
1-4	JBTN-1101MEKA	M	Button, Power, Vol-up/down	AD
1-5	JBTN-1102MEKA	M	Button, Ch-up/down	AD
2	GCABB1131MEKA	M	Rear Cabinet	AZ

CABINET PARTS LOCATION



MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
⚠ ACC701	QACCD3065CESA	M	AC Cord	AN
	QCNW-0130MEZZ	M	Connecting Cord	AF
	QCNW-0134MEZZ	M	Connecting Cord	AE
	QCNW-0137MEZZ	M	Connecting Cord	AH
	QCNW-0166MEZZ	M	Connecting Cord	AD
	QCNW-0167MEZZ	M	Connecting Cord	AC
SP1	VSP0080PBK98A	M	Speaker 8 ohm, (R)	AG
SP2	VSP0080PBK98A	M	Speaker 8 ohm, (L)	AG

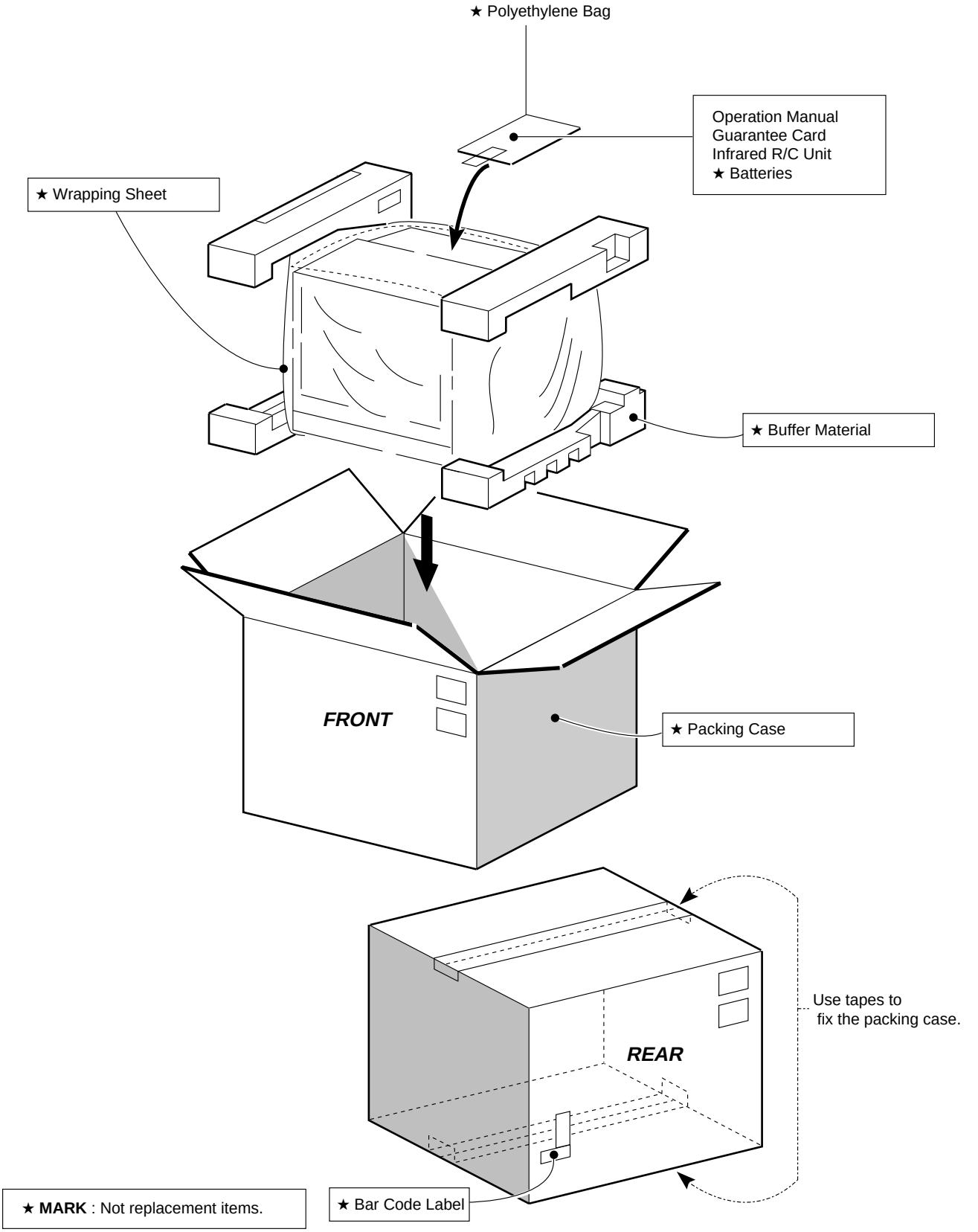
SUPPLIED ACCESORRIES

	RRMCG1396CESA	M	Infrared R/C Unit	AW
	TGAN-1006MEZZ	M	Guarantee Card (27N-S300)	AA
	TiNS-6921MEZZ	M	Operation Manual (27N-S300)	AD
	TiNS-6969MEZZ	M	Operation Manual (CN27S30)	AD

PACKING PARTS
(NOT REPLACEMENT ITEM)

SPAKC0667MEZZ	–	Packing Case (27N-S300)	—
SPAKC0671MEZZ	–	Packing Case (CN27S30)	—
SPAKX0165MEZZ	–	Buffer Material	—
SSAKA0004MEZZ	–	Wrapping Sheet	—

PACKING OF THE SET



★ **MARK** : Not replacement items.

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TQ0872-S
Apr. 2000 Printed in Japan
MI. DS

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